

Avionics Technician Second Class



U.S. Coast Guard Pamphlet No. A20201 (01/98)

Creation Date: May 1998

Revision Date: N/A

Next Review Date: May 2001

Nonresident Training U. S. Coast Guard Aviation Technical Training Center Elizabeth City, NC 27909-5003 (252) 335-6856

QUESTIONS ABOUT THIS TEXT SHOULD BE ADDRESSED TO THE SUBJECT MATTER SPECIALIST FOR THE **AVIONICS TECHNICIAN** (AVT) RATING

References

Selected References

This pamphlet contains original material developed at AVTECHTRACEN Elizabeth City, NC. The references used to develop this pamphlet are listed throughout the text under the corresponding performance qualification number. A complete list of these references is provided in Appendix C.

The purpose of this pamphlet is to provide guidance and references to assist you in completing the AVT2 Performance Qualifications and the End-of-Course Test.

Important Note

This text has been compiled for TRAINING ONLY. It should NOT be used in place of official directives or publications. The text information is current according to the references listed. You should, however, remember that it is YOUR responsibility to keep up with the latest professional information available for your rate. Current information is available in the Enlisted Qualifications Manual, COMDTINST 1414.8 (series).

How to Proceed

This pamphlet contains assignment objectives and syllabus objectives which are used to describe the tasks you will need to perform to satisfy the requirements of the performance qualifications.

- For the assignments: Read the text and answer the self-quiz at the end of each assignment. The 5.B.GTG assignment should be completed before attempting to complete any of the Aircraft Maintenance performance qualifications (5.B. series).
- For the syllabus: Read the performance, then read the syllabus performance objectives and refer to the applicable references listed to perform the task. Performance of these objectives should be completed on your assigned aircraft type (only one type is required).

-The initial line (______) in the syllabus portion is used to keep track of each task you have completed. This entry should be completed by a petty officer at least one pay grade higher than the student.

End-of-Course Test (EOCT)

To prepare for the EOCT, read the assignment objectives and carefully study the information contained in the text. You should also review the self-quiz for each assignment along with the pamphlet review quiz. Answers and references are found on the page following each quiz. Remember, these questions are only samples of the types of questions on the EOCT.

The syllabus performance objectives will NOT be tested on the EOCT due to their aircraft specific nature.

Notice to Student (Continued)

Performance Qualifications Sign-Off

As PROFICIENCY in each performance qualification is demonstrated, the DATE and INITIALS columns of the Record of Performance Qualifications (CG-3303C-19, Tab-3 of this pamphlet) should be completed by your supervisor. A "Notice to Supervisor" page is included to provide guidance for your supervisor. Ensure that your supervisor reads the instructions on that page. Also, Tab-3 should be used as your permanent record documenting the completion of each performance qualification. It is up to YOU to ensure that this documentation is complete in order to be considered eligible for the Service Wide Exam (SWE).

This pamphlet was developed as a guide to assist you in completing your performance qualifications. You should **USE IT**.

Performance Qualification Numbers

The performance qualifications beginning with a "5" are the requirements for qualifying for E-5. Also, performance qualifications ending in "c" are common for all aviation ratings. The assignments need not be completed in any specific order.

Student Feedback Form

A student feedback form (Appendix D) is provided for you to submit recommendations to the subject matter specialist. As you read the training material, you may have comments, such as

- suggestions for adding or deleting information,
- notations of errors in the text (include page number and your reference material), or
- questions about the text or a practice exercise.

Write your comments in sentence form on Appendix D. Tear it out of the pamphlet and mail it through your unit's mail room. The subject matter specialist will review all submissions received.

SWE Study Suggestions

Servicewide exam questions for your rate and pay grade are based on the Professional and Military Requirements sections of the Enlisted Qualifications Manual. If you use the references listed in your rating section of the Enlisted Qualifications Manual, COMDTINST 1414.8 (series), you should have good information for review when you prepare for your servicewide exam.

The purpose of this pamphlet is to provide guidance and references to assist the student in completing the AVT2 performance qualifications and the EOCT. It also identifies what the student is expected to know and demonstrate for each performance qualification.

NOTE

This text has been compiled for TRAINING ONLY. It should NOT be used in place of official directives or publications. The text information is current according to the references listed to date.

Supervisor Guidelines

Supervisors should follow the guidelines provided below to improve the consistency of the training process:

- The syllabus portion of this pamphlet contains objectives for each performance qualification. The student should be able to demonstrate proficiency in each of the objectives in order to meet the requirements for the performance qualification. The supervisor should use the syllabus to determine if the student is proficient in each performance qualification.
- An initial line (_______) is provided to keep track of each objective the student has completed, and should be initialed by a petty officer at least one pay grade higher than the student. The initial line also provides a quick way to chart the student's progress and allows you, the supervisor, to assess the student's training needs and to plan accordingly.
- The supervisor should provide the discrepancy information or scenarios for the syllabus objectives requiring this information. It's up to the supervisor to decide whether or not to use actual discrepancies such as CG 4377 Part III or CG 4377B (No Fly) entries or to give the student realistic scenarios to work on. Again, the supervisor should decide what method will work best for their training environment.

Notice to Supervisor (Continued)

Performance Qualifications Sign-Off

NOTE

It is highly recommended that all supervisors review the information covered in the "Administration" section of the Enlisted Qualifications Manual, COMDTINST 1414.8 (series) before any performance qualifications are signed-off or waived.

As PROFICIENCY in each performance qualification is demonstrated, the DATE and INITIALS columns of the Record of Performance Qualifications (CG-3303C-19, Tab-3 of this pamphlet) should be signed-off by the student's supervisor. Also, Tab-3 should be used as the student's permanent record documenting the completion of each performance qualification.

For More Information

For more detailed information on completion of the Record of Performance Qualifications, refer to (COMDTINST M1414.8, series).

In This Pamphlet

TITLE

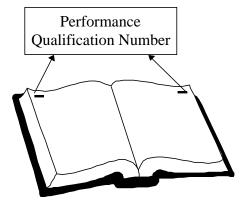
PAGE

References	ii
Notice to Student	iii
Notice to Supervisor	v

Performance Qualification Assignments

ASSIGNMENTS

The assignments are numbered and arranged in the same manner as are the performance qualifications; Alpha-Numeric. The actual performance qualification number is listed in the upper-outer corner of each page, which allows you to quickly scan the pages in order to find the specific performance qualification section. See the example below:



APPENDIXES

Pamphlet Review Quiz	A-1
Pamphlet Review Quiz Answer Key	B-1
References	C-1
Student Feedback Form	D-1
AVT Record Of Performance Qualifications	Tab-3

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Syllabus

5.A.

01c

Performance

COMPLETE assigned aircraft Aircrewmember Syllabus.

Performance Objective

Given an assigned aircraft type, **COMPLETE** the applicable Aircrewmember course and the syllabus IAW your assigned station's instructions.

NOTE

After being assigned an aircraft type, contact your unit's Educational Services Officer for course enrollment.

1

5.A.01c Blank Page

Syllabus 5.A.02c

Performance

ORDER aircraft parts.

Performance Objective 1

Given the name of an aircraft part and the name of the related system, **RESEARCH** the information needed to order the part using the applicable aircraft Illustrated Parts Catalogs and the Federal Logistics Data System (Fed Log).

NOTE

The E-4 Aviation Administration Pamphlet #A1AA03, included with the Airman Course, contains the information required to help you complete this performance objective.

Performance Objective 2

Using the information obtained from performance objective 1, **SUBMIT** an aircraft parts requisition to supply IAW the Aeronautical Engineering Maintenance Manual, COMDINST M13020.1 (series) and local station instructions.

1

Objectives

To successfully complete this assignment, you must study the text and master the following.

- **STATE** in writing how often a shop technical publications audit should be completed.
- **STATE** in writing the two primary functions of a technical library audit.
- **STATE** in writing the time allowed for completion of a shop technical publications audit.
- **VERIFY** (compare) publication status on an audit report.
- **ANNOTATE** (write) correct entries on an audit report that contains discrepancies

References

The information contained in this assignment can be found in the Technical Information Management and Ordering System (TIMOS) Users Manual, CGTO PG-85-00-50 and ACMS cards.

1

5.A.03c Overview

Introduction

In this reading assignment you will complete procedures required to perform an audit of your shop technical publications library.

Aircraft technicians frequently use technical publications and directives such as ACMS cards and maintenance manuals to perform complex aircraft maintenance.

One of your tasks may be to perform periodic audits of your shop or workcenter technical library to verify all publications and directives contain the most current changes. This will ensure that all technicians are received valid maintenance information

In This Assignment

Subject	Page
Technical Information Management and Ordering System	3
Technical Library Audits	4
Publication Audit Report	7
Audit Report Information	9
Performing Publications Audit	10
Publication Audit Practice	17
Publication Audit Feedback	23
Technical Publications Audit Self-Quiz	24
Technical Publications Audit Self-Quiz Feedback	25
Syllabus	26

In this section we will discuss a general background of the Technical Information Management and Ordering System (TIMOS) used by the Coast Guard. This instruction will provide some insight on how a technical publication audit fits into the TIMOS system.

Background

TIMOS is a computerized publication ordering and inventory management system designed to assist air stations with establishing and maintaining their technical publication requirements. This system also allows authorized users to approve or reject orders, as well as track publication inventories at air stations. The system functions have been designed to correspond to the order of events in which a publication order is processed.

Air Stations/ARSC Communications

This system allows Coast Guard air stations to communicate with the technical publications section at AR&SC to:

- Order Publications
- Establish or change initial publication distribution
- Follow up/cancel existing orders

Publication Updates

Once the unit's publication requirements are transmitted to the TIMOS computer database, all technical publications will be on automatic distribution for necessary periodic updates.

Although the TIMOS publication tracking software is an excellent tool for managing and maintaining a unit's publication library. An audit of all-technical publications and directives is required every four months as a check-and-balance to the system.

This audit is tracked on ACMS and is signed-off by the librarian when completed.

Location of Technical Libraries

Not all of a unit's technical publications and directives are located in a central QA library. Extra copies of applicable publications and directives are also located in shops or work center technical libraries. Some publications may be unique to your shop alone.

Your Responsibilities

Your responsibilities during the audit will be to assist the librarian by cross-checking your shop publications and directives with the technical librarians records to ensure complete accuracy.

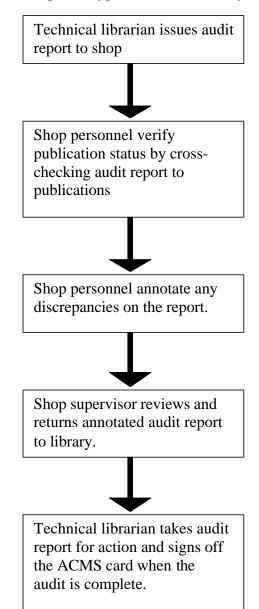
Function of a Publication Audit

The two primary functions of a publication audit are to:

- Ensure all of your technical publications and directives contain most current updated information.
- Provide an opportunity to review your publication requirements, and make recommendations for additions or deletions to the shop technical library.

Audit Process

The flowchart below depicts a typical technical library audit process:



5.A.03c Blank Page

Definition

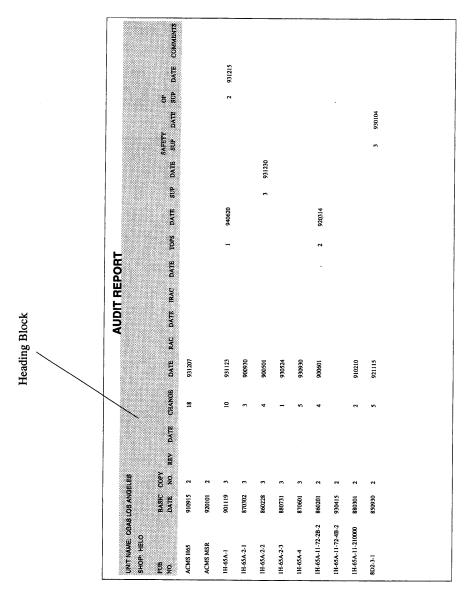
The Publication Audit Report is a computer printout generated by the TIMOS system. It is a comprehensive listing of a shops technical publications including all updates that have been issued.

Purpose

The technical librarian issues an audit request to each shop every four months, or at the shop's request. This report allows shop personnel to verify the status of their shop's publications by cross-checking the list with each publication.

Audit Report Example

Below is an example of a typical shop publications Audit Report.



In this section we will explain the information displayed on a typical publication Audit Report. Most of the terms and information contained on the report are self-explanatory, but there are some items that you may be unfamiliar with.

Heading and Information Blocks

In the illustration on the preceding page, the Audit Report is divided into two major sections as follows:

The shaded area of the example highlights the "Heading Block" which is common to all Audit Reports. The heading block contains several categories used to divide data displayed in the "Information Block" section.

The unshaded area of the example depicts an information block, which contains data about your particular shop library contents.

Heading Categories

The first column of the Heading Block is the publication number followed by the basic date. The copy number column is for the librarians use only so it is disregarded. The next 16 columns list each type of update that may be issued for a publication followed by its' effective date. The last column is for any comments that the librarian may have entered into the database about the publication.

In this section we provide guidance on how to perform a technical publication audit with a condensed demonstration. In this scenario, the librarian sends a memorandum (memo) along with the audit report outlining what must be done. At your unit, you may or may not receive a similar memo. You must complete the audit and return the report to the library within five working days.

Scenario

Petty Officer Gimble, of the helo shop, has received a memo with an attached audit report (see next page) from the unit technical librarian requesting an audit of the helo shop technical library. The memo below provides instructions on how to complete the audit.

Library Audit Memo Example

The following example gives PO Gimble directions on completing the audit.

From: AST1 Roscher To: All Shops Supervisors

- 1. It is time for the technical publication library audit. I am requesting your assistance in performing an audit of your respective shop technical library. Listed below are the steps required to complete your audit.
 - A. Verify that the attached Audit Report is for your shop.
 - B. Ensure all publication updates that have been issued by QA are installed in your shop publications.
 - C. Locate each manual on your report and verify the following information:
 - (1) Basic Date—Should match basic date on publication title page.
 - (2) All updates listed on the report are installed in your publications.
 - D. You may disregard the copy number column.
 - E. All entries/corrections to the audit report should be in red ink. As each publication is checked, place a checkmark next to the manual number, If there are discrepancies, please circle the incorrect information and enter the actual information from the publication.
- 2. After all manuals have been checked return the annotated Audit Report to AST1 Roscher within five working days. Thank your for your assistance.

AST1 Roscher

Technical Librarian

Audit Report Example

Below is an example of the Audit Report PO Gimble received for the Helo shop.

UNIT NAME: CGAS ELIZABETH CITY SHOP: HELO	ELIZABET	∓ TIO H					₹	NODI	Æ	AUDIT REPORT									
PUB NO.	BASIC	COPY NO.	REV	DATE	CHANGE	DATE	RAC	DATE	IRAC	DATE	TOPS	DATE	SUP	DATE	SAFETY	DATE	OP SUP	DATE	COMMENTS
A1-H60CA-IPB-450	930808	7			-	940115			7	931202									
A1-H60CA-140-200	930131	7																	
A1-H60CA-140-400	930131	6			-	930808													
A1-H60CA-150-100 91053	910531				e	930205													
A1-H60CA-150-200 91053	910531	9			7	930205													
AI-H60CA-150-300	900109	€0			2	930205													
A1-H60CA-150-400	920531	3			ю	930808													
A1-H60CA-220-100	910531	7			-	920531						-							
A1-H60CA-220-200	910531	7			4	930808											-		
A1-H60CA-220-300	920531	7			E	930808			vo	931217									
A1-H60CA-220-400	920531	7			ws.	921115	7	930507											
A1-H60CA-240-100	920815	7			_	930205													
A1-H60CA-240-200	920815	7			2	930808													
																		ļ	

Scenario (Continued)

After ensuring this audit report (see page 11) is for the helo shop, PO Gimble located the manual number A1-H60CA-220-300, and opens the manual to the title page (see next page).

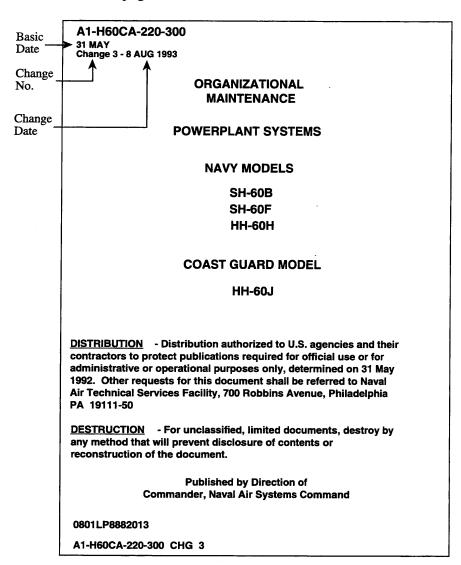
On the publication title page, PO Gimble notes the following information:

- Basic Date 31 May 92
- Change Number Change 3
- Change Date 08 Aug 93

This information is consistent with the audit list shown on the preceding page.

Title Page

Below is the title page for technical manual A1-H60CA-220-300.



Scenario (Continued)

PO Gimble verifies all the changes shown on the List of Effective pages (below) are installed by cross checking actual pages in the manual.

According to the List of Effective pages, Changes 1-3 are effective Rapid Action Changes (RAC) should be installed.

All changes and RACs are confirmed to be installed.

Change 3-8	August 1993					Page A
•		CAL INDEX OF EFFECT	TIVE WOR	K PACKAGES/F	PAGES	Ū
		LIST OF CURRI	ENT CHANG	SES		
	31 May 1992				-	
	08 August 1992					
	15 January 1993					
	05 February 1993					
	14 June 1993					
Change 3	08 August 1993					
superseded an accordance with applicable work	d deleted work package: th applicable regulations k package. The portion of	the manual are listed in thi s/pages. Superseded and of . If changed pages are to bot for text affected in a change of each column of text. A of	deleted clas be issued to ed or revised	sified work package, a work package, work package is	ges/pages shall be de insert the changed pa indicated by change t	stroyed in ages in the bars or the
WP				WP	Title	
Number	Title			Number	1100	
Transc.	Tiuc			rambe.		
Page A	Numerical Index of	Effective Work		007 00	Oil System	
ū	Packages/Pages			008 00	Fuel Boost pur	np
	• •			009 00	Torque and Ov	erspeed
					Sensor	
TDPR-1		ublications Deficiency		010 00	Electrical Cont	rol Unit
	Reports Incorporat			011 00	Air Inlet	
HMWS-1	Hazardous Materia			012 00	Therocouple A	
001 00	Alaphabetical Inde:	x		013 00	Start Speed Sv	
002 00	Introduction			014 00	Engine Control	
003 00	Engines			015 00	Exhuast Modu	
004 00		nge Assembly (QECA)		016 00	Load Demand	
005 00	Accessory Gear Bo	ox .		017 00	Hover Infared	Suppression
					System	
006 00	Radial Drive Shaft			018 00	Anti-Ice Start/E	lieed Valve
т	OTAL NUMBER OF P	AGES IN THIS MANUA	L IS 243 C	ONSISTING OF	THE FOLLOWING	3 :
WP/Page	Change	WP/Page	Chang	e	WP/Page	Chang
No.	No.	No.	No.		No.	No.
Title	3	006 00	2		013 00	2
A	3	1-17	2		1-12	2
TDPR-1		1-18 Blank	2		014 00	3
HMWS	3	007 00	3		1-20	3
001 00		1-8	3		015 00	3
1-5	3	00 800	3		1-9	3
6 Blank		1-14			10 Blank	3
002 00		009 00			016 00	3
1-14		1-12	1		1-17	3
003 00		010 00			18 Blank	3
	2	1-7	3		017 00	0
1-26						
1-26 004 00		8 Blank	3		1-23	0
	0				1-23 24 Blank	

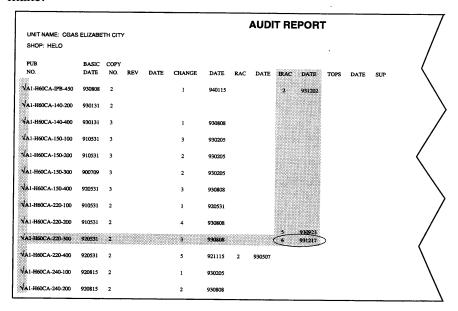
Scenario (Continued)

PO Gimble turns to the front of the manual looking for Interim Rapid Action Change (IRAC) #6, which according to the Audit Report shown below should be the latest IRAC installed in this publication. He doesn't find IRAC #6 but does find IRAC #5 dated 930923 (see example on next page).

This discrepancy is annotated on the Audit Report by circling the incorrect information, and writing in actual information from the manual update.

Annotated Audit Report

After checking all the publications, PO Gimble annotated the Audit Report as shown below. The shaded areas highlight the information that PO Gimble was looking for and the entries he was requiring to make.



Example of Latest Supplement

The IRAC shown below is an example of the latest supplement installed in A1-H60CA-220-300.

ZZCCGGBA817

RUHGOAA T COMCARGRU SEVEN

RUHFPAA T HELOSUPPSECRON FIVE

RUHNABE T USS ABRAHAM LINCOLN

P 231920Z SEP 93 ZFD

FROM DPRO SIKORSKY STRATFORD CT//RAE60//

TO AIG ONE ONE SIX FIVE

ONE ONE THREE SEVEN FIVE

ONE ONE FOUR TWO ONE

ACCT DSGA4D

BT

UNCLASS//NO5600//

SECTION ONE OF ONE

SUBJ: HH-60 PROGRAM INTERMIN RAPID ACTION CHANGE NO.5 TO TECHNICAL MANUAL A1-H60CA-220-300,

POWERPLANT SYSTEMS, ORGANIZATIONAL LEVEL

MAINTENANCE MANUAL.

REF: A1-H60CA-220-300, WP 005 00, PAGE 2, STEP 5A.

1. PEN AND INK CHANGES TO THE TECHNICAL CONTENT OF A MANUAL ARE NOT AUTHORIZED. THE FOLLOWING TECHNICAL CONTENT CHANGE INFORMATION APPLIES TO THE ABOVE REFERENCED PAGE AND PARAGRAPH UNTIL A FORMAL CHANGE IS RELEASED.

REVISE FIRST BULLET OF CAUTION PRECEEDING STEP 5A TO READ AS FOLLOWS:

ENGINE MUST BE SHUT DOWN AND ALLOWED TO COOL TO A TGT OF 80 DEGREES C (176 DEGREES F) OR BELOW BEFORE CLEANING SOLUTION IS SPRAYED INTO ENGINE.

BT

#8323

In this section you will practice performing publication audits on selected technical manuals.

This practice exercise consists of a scenario, a procedure table, an example Audit Report, and an example List of Effective Pages. This information is located on the following pages.

The manual selected for this exercise may or may not contain discrepancies in accordance with the information provided in the Audit Report.

Directions

Read the scenario below carefully and follow the procedure table on the next page to complete the exercise. Review the example publication (TO 8D2-3-1) on page 20-22 and annotate the Audit Report on page 19 with you results.

Try to complete the practice exercise without assistance, but should you have trouble, review the appropriate section of this assignment.

Scenario

You are stationed at Air Station Los Angeles. The technical librarian sends you an audit report (page19) and a memo requesting you to perform an audit of the helo shop library.

You have started your task, and up to now you have found no discrepancies. You locate the last manual on the audit report, T.O. 8D2-3-1, and compare the data to the title page, the List of Effective pages, and the Safety Supplement.

Verification indicates that all the changes up to and including Change 4 are installed in T.O. 8D2-3-1.

While performing the audit, you determine that your shop publication requirement have not changed.

Procedure Table

Follow this procedure table to complete the practice exercise.

Step	Action
1	Verify Audit Report is for your shop.
2	Verify basic date of manual.
3	Verify latest revision and date.
4	Verify latest change number and date.
5	Verify all changes shown on the list of effective pages are installed in the manual.
6	Verify the numbers and the dates of the following applicable updates: Rapid Action Change (RAC), Interim Rapid Action Changes (IRAC), Technical Ordering Page Supplements (TOPS), Supplements (SUP), Safety Supplements (SAFETY SUP), Operational Supplements (OP SUP).
7	Place a check mark next to manuals as they are completed.
8	Identify discrepancies by circling incorrect information and writing in actual information.
9	Return the report to the library after completing the audit.

Audit Report Example

While performing the audit, annotate this example of the helo shop audit report with the required information.

							٩	MOL	T REI	AUDIT REPORT									
UNIT NAME: CGAS LOS ANGELES	S LOS ANG	ELES																	
SHOP: HELO																			
PUB NO.	BASIC	COPY NO.	REV	DATE	CHANGE	DATE	RAC	DATE	IRAC	DATE	TOPS	DATE	SUP	S DATE	SAFETY SUP I	DATE S	OP SUP D	DATE (COMMENTS
ACMS H65	910015	7			82	931207													
ACMS MSR	920101	7																	
1H-65A-1	901119	3			10	931123					-	940620					2	931215	
1H-65A-2-1	870302	3			€0	900930													
1H-65A-2-2	860228	3			4	900501							6	931230					
IH-65A-2-3	880731	æ			-	930524													
1H-65A-4	870601	3			٠.	930930													
1H-65A-11-72-2B-2	860201	7			4	900601					٨.	920314	_						
1H-65A-11-72-4B-2	930415	7															-		
1H-65A-11-210000	880301	7			2	910210													
8D2-3-1	850930	2			v s	921115									9	930104			

Publication Supplement Example

Use this Safety Supplement example to complete the practice exercise.

SS	SS SS SS SS SS SS SS SS SS T.O. 8D2-3-1 SS-3	SS
ss	TECHNICAL MANUAL SAFETY SUPPLEMENT	SS
SS	OPERATION SERVICE AND REPAIR AIRCRAFT NICKEL CADMIUM	SS
SS		SS
SS	THIS PUBLICATION SUPERCEDES T.O. 8D2-3-1SS-1 DATED 09 OCTOBER 1992, and supplements T.O. 8D2-3-1 DATED 30 SEPTEMBER 1985. Reference to this supplement will be made on the title page of the basic manual by personnel responsible for maintaining the publication in a current status.	SS
SS	DISTRIBUTION STATEMENT B - Distribution authorized to U.S. Government agencies only, for administrative or operational use (04 JAN 1993) . Other requests for this document shall be referred to Sacramento ALC/TILBE, 3200 Peacekeeper Way, Suite 1 McCellian AFB, CA 95652.	SS
SS		SS
SS		SS
SS	PURPOSE. To update the basic manual. 04 Jan 1993	SS
SS	INSTRUCTIONS. a. On page 4-11, paragraph 4-49 is added to read as follows.	ss
SS	4-49. HEATER BLANKET WIRING HARNESS: Two element heater blankets are to be wired in series with each other, and not in parallel.	SS
SS	WARNING If wired in parallel, one element may overheat. This may cause internal shorting of cell(s) resulting in the failure of battery and cell case rupture.	ss
SS	THE END 1/ (2 Blank)	ss
SS	SS SS SAFETY SUPPLEMENT SS SS SS	SS

Title Page Example

Use this Title Page example to complete this practice exercise.

T.O. 8D2-3-1

TECHNICAL MANUAL

OPERATION, SERVICE AND REPAIR

AIRCRAFT NICKEL CADMIUM STORAGE BATTERIES

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30 SEPTEMBER 1985 CHANGE 4 - 13 MAY 1992

List of Effective Pages Example

Use this List of Effective Pages example to complete the practice exercise.

LIST OF EFFE	CTIVE PAG		ATEST CHANGED P	AGES, DESTROY SUPERSEDE	PAGES
		NOTE:	vertical line in the di	affected by the changes is indica outer margins of the page. Chang licated by miniature pointing hand diagrams are indicated by shader	jesto s.
Dates of issue for o	original and cha	inged pages are:			
Original030 Change113 Change204 Change308 Change404	MAY 87 MAY 89 JUL 91 MAY 92				
•	•	ication is 52 consisting		u .	
Page No.	Change *No.	Page No.	Change *No.	Page No.	Chang *No.
Title	4	4-3	2	· 7-3	1
A	4	4-4	4	7-4	1
i	2	4-4.1 Added	-	/-4	'
	_	4-4.2 Blank	2		
i-v	.3				
	3 3		_		
vi Blank	3	4-5	1		
vi Blank 1-1	-		_		
vi Blank 1-1 1-2 - 1-3	3 3	4-5 4-6 - 4-7	1 3		
vi Blank 1-1 1-2 - 1-3 1-4	3 3 0	4-5 4-6 - 4-7 4-8 - 4-11	1 3 0		
vi Blank 1-1 1-2 - 1-3 1-4 1-5	3 3 0 3	4-5 4-6 - 4-7 4-8 - 4-11 4-12 Blank	1 3 0		
vi Blank	3 3 0 3 1	4-5 4-6 - 4-7 4-8 - 4-11 4-12 Blank 5-1	1 3 0 0		
vi Blank	3 3 0 3 1	4-5 4-6 - 4-7 4-8 - 4-11 4-12 Blank 5-1 5-2 - 5-3	1 3 0 0 0		
vi Blank	3 3 0 3 1 0	4-5 4-6 - 4-7 4-8 - 4-11 4-12 Blank 5-1 5-2 - 5-3 5-4	1 3 0 0 0 1		
vi Blank	3 3 0 3 1 0 1	4-5 4-6 - 4-7 4-8 - 4-11 4-12 Blank 5-1 5-2 - 5-3 5-4 5-5-5	1 3 0 0 0 1 4		
vi Blank	3 3 0 3 1 0 1 0 3	4-5	1 3 0 0 0 1 4 1		
1-2 - 1-3	3 3 0 3 1 0 1 0 3 4	4-5	1 3 0 0 0 1 4 1 0		
vi Blank	3 3 0 3 1 0 1 0 3 4 3 4 3	4-5	1 3 0 0 0 1 4 1 0 2		
vi Blank	3 3 0 3 1 0 1 0 3 4 3 4	4-5	1 3 0 0 0 1 4 1 0 2 4 0		

USAF

A Change 4

Feedback

Your annotated Audit Report should be similar to the one shown below. The shaded areas highlight the entries you should have made. If you had troubles with this exercise, please review the appropriate section of this assignment.

UNIT NAME: CGAS LOS ANGELES	LOS ANG	ELES					⋖	NOD!	r RE	AUDIT REPORT	L								
SHOP: HELO																			
PUB NO.	BASIC	COPY NO.	REV	DATE	CHANGE	DATE	RAC	DATE IRAC		DATE	TOPS	DATE	SUP	DATE	SAFETY	DATE	OP SUP	DATE	DATE COMMENTS
ACMS H65	910915	7			18	931207													
ACMS MSR	920101	2																	
IH-65A-1	901119	3			01	931123					-	940620					7	931215	
[H-65A-2-1	870302				ю	900930													
IH-65A-2-2	860228	3			4	102006							3	931230					
IH-65A-2-3	880731	3			-	930524													
IH-65A-4	870601	3			ĸ	930930													
IH-65A-11-72-2B-2	860201	2			4	109006					7	920314	-						
IH-65A-11-72-4B-2	930415	2																-	
(H-65A-11-210000	880301	7			2	910210													
§D2-3-1	850930	2		V	Chg 4	9201115	^								.	930104			

Questions

Answer the following questions on technical publications audits.

1) How often should all shop technical publications and directives be audited?

a) _____

2) From memory, write the two primary functions of a technical library audit.

a) _____

b) _____

3) After the audit report is issued, how much time is allowed for completion of a shop technical publication audit?

n) _____

Feedback

Compare your answers to the feedback provided below. If you had trouble with the Self-Quiz, please review the appropriate page of this reading assignment.

Questions	Answers	Reference
1.	Every four months	4
2.	a. Ensure publications contain the most current changes/updates.b. Provides an opportunity to review your shop technical library requirements.	4
3.	five working days	10

5.A.03c Syllabus

Performance

AUDIT technical publication directives.

Performance Objective 1

Given a technical publications audit report, **VERIFY** the shop publications status compared to the audit report IAW the Technical Information Management and Ordering System, CGTO PG-85-00-50, and the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)

Performance Objective 2

Given a technical publications audit report, **ANNOTATE** (write)correction entries on the audit IAW the Technical Information Management and Ordering System, CGTO PG-85-00-50, and the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)

Objectives

To successfully complete this assignment, you must study the next and master the following objectives:

- **STATE** in writing the forms used for recommending a change to publications.
- **COMPLETE** a CG-22 form with the required information from a given scenario.
- **COMPLETE** an AF Form 847 with the required information from a given scenario.

References

The information contained in this assignment can be found in the following references:

- Aeronautical Engineering Maintenance Management Manual, COMDINST M13020.1
- Aeronautical Engineering Process Guide, (CG-22 Process), CGTO PG-85-00-20

1

5.A.04c Overview

Introduction

In this reading assignment, you will learn how to fill out and submit the appropriate form used to propose changes to directives, ACMS, or technical publications.

As a Coast Guard Petty Officer and an aircraft technician you must rely upon many different publications to perform your duties. Keeping these publications up to date and as reliable as possible is everyone's responsibility. There will be times when you will read something you know is incorrect and affects the meaning of instructive information. These errors could be as simple as a typing error or as critical as a missing step on an ACMS card. When an error is encountered, **You** should attempt to get corrected. If you wait for the other person to submit a change form, the error may never be corrected.

In This Assignment

In this assignment we will discuss the following topics:

Subject	Page
Publication Improvement Recommendation Forms	3
Completing the CG-22 Form	5
CG-22 Form Practice	10
CG-22 Form Feedback	12
Completing the AF Form 847	13
AF Form 847 Practice	16
AF Form 847 Feedback	18
Publication Improvement System Self-Quiz	19
Publication Improvement System Self-Quiz Feedback	20
Syllabus	21

Introduction

Publication improvement recommendation forms are used to recommend changes, error corrections, updates or deletions to all publications and ACMS/MSR maintenance procedure cards in use by the Coast Guard.

Types of Forms

The two types of forms discussed in the instructions and used to recommend changes to publication are as follows:

- CG-22, Aeronautical Publication Change Recommendation Form
- AF Form 847, Recommendation for Change of Publication (Flight and Standardization Manual)

5.A.04c Blank Page

Introduction

The Aeronautical Publication Change Recommendation Form (CG-22) is used to recommend changes to correct errors which affect the meaning of instructive information or procedures contained in technical manuals or procedures contained in technical manuals or ACMS/MSR cards except aircraft flight manuals (-1 series).

Availability of Forms

The CG-22 Form can be obtained from your shop supervisor or the Quality Assurance (QA) office. If you have access to a CG standard work station II, this form is available on the SAE Forms Plus Laser Library, or Jet Filler on standard work station III. If more room is needed than is available on the CG-22 Form, also obtain a CG-22 continuation sheet (see example on page 8).

Operation

The technician/mechanic who originates a CG-22 form fills out a draft copy and submits it to the unit's QA office. The proposal is reviewed by QA personnel for validity and technical accuracy. They then make necessary corrections without changing the intended meaning of the original proposal. Using a CG standard work station, QA personnel transfer the information onto the computer version of the form and then print out what becomes known as the original. You, the originator, will be asked to review this original to ensure it still says what you intended to say.

Signatures

Once the originator and QA are in agreement, the CG-22 Form is signed by the originator and the QA officer. It is then forwarded to the unit engineering Officer for local approval.

Control Number

The control number enables tracking of individual CG-22's. After the Engineering Officer approves the CG-22, the ACMS Field Terminal Operator will enter the information into the ACMS CG-22 Tracking System. The ACMS then assigns a control number for the CG-22 which is handwritten on the form.

Distribution

After the control number is entered on the CG-22, it is returned to QA for submission to the appropriate aircraft Prime Unit. Changes that are not specific to any aircraft type can be sent to any Prime Unit. Distribution is limited to the original CG-22 Form being submitted to Prime Unit.

CG-22 Block Entry Table

The following table contains remarks for the blocks that should be completed prior to submitting the CG-22 Form to the Quality Assurance Office. Only the applicable blocks from block #1 through block #24 should have an entry. See example on the following page.

Block #	Entry/Remarks
1	Insert unit OPFAC number
2	Insert unit name to identify the originating unit.
3	Insert the date (MM DD YY – i.e. 10 25 99).
4	Quality Assurance will insert the Control Number
5	Insert change title if applicable
6	Insert Originator name
7	Insert originator phone
8	Indicate the type of publication affected.
9	Enter aircraft type or equipment affected by this change.
10	Insert yes or no if change is procedural.
11	Insert yes or no if change affects a TCTO.
12	Insert the publication number.
13	Insert the revision date.
14	Insert the affected page(s)
15	Insert the ATA chapter
16	Insert the affected paragraph
17	Insert the affected figure (if applicable)
18	Insert the affected Commandant Change (if applicable)
19	Insert the affected MPC number (if applicable)
20	Insert the affected date of MPC (if applicable)
21	Insert the affected page of MPC (if applicable)
22	Insert the affected interval change (if applicable)
23	Describe the manual deficiency and recommend changes using clear and
	concise terms. Use a continuation sheet if necessary.
24	Describe the MPC deficiency and recommend changes using clear and concise
	terms. Use a continuation sheet if necessary. (if applicable)
25	Ensure QA receives and signs original copy of CG-22

Continued next page

AVT2

Example of a Completed CG-22

The following is an example of a CG-22 Form that was submitted by the Aviation Technical Training Center.

AERONAUTICAL PUBLICATION CHANGE RECOMMENDATION					
1. OPFAC	2. UNIT		3. DATE INITIATED		. CONTROL NUMBER
78 - 61300	ATTC, Elizabeth			0 / 25 / 99	93 - 016 - R
5. CHANGE TITLE		6. ORIGINATOR (F	rst, MI, Last, Rank) Paul. D. Doe	AVTC	'. ORIGINATOR PHONE (252) 335-6856
8. CG-22 TYPE	9. AIRCRAFT TYPE		10. PROCEDURAL (Y/I		1. TCTO (Y/N)
Pub XX MPC Comb 12. PUBLICATION NUMBER		HU-25	13. REV, DATE		NO NO
1U - 25/	4 - 6WB			02 / 04 / 84	4. PAGE 8 / 146 / 147
15. ATA CHAPTER 23 - 51 - 00	16. PARAGRAPH	39a , 1e	17. FIGURE	1	8. COMDT. CHANGE (Y/N)
19. MPC NUMBER	20. DATE		21. PAGE	2	2. INTERVAL CHANGE (Y/N)
23. PUBLICATIO		at a 47 O	lasar 1 W/o44	lood modeta	d
	nual states th				
	esting. This				
Collins '	"Production	Test Requ	irements",	Audio Con	trol
RECOMMENDATION:					
Change the	resister value to 47	70 Ohms 1 W:	ntt		
Change the	resister varue to 4	70 Omms, 1 ***			
24. MPC DEFICIENCY:					
E4. IIII O DEI IOIENOTT					
RECOMMENDATION:					
25. LOCAL QA (Signature)			26. ENGINEERING OFF	ICER OR DESIGNATED REF	RESENTATIVE (Signature)
AT DRINE WIT DEMARKS	- monthally realistic services and accommodate		NA PARAMETRIKA DI BARRANIA PARAMETRIKA DI STANDA DI	Province and the control of the state of the	Managery adherence in the American Particle A. S. A. Co.
27. PRIME UNIT REMARKS:					
			T	28. DATE OUT:	
29. ACTION CODE (A/P/D/X) APP. PAR. DISA	DD OANOE!	30. PRIORITY U/N/R	31. TOPS (Y/N)	32. SIGNATURE	
SCHRONING AND SAME STATE OF ST	PP CANCEL	O/N/R	Y/N	CONTRACTOR MESSAGES AND CHARGES AND ESCAL CHARGES	Control of the contro
33. TECHNICAL SERVICES REMARKS:					
				34. DATE OUT:	
35. ACTION CODE (A/P/D/X)		36. PRIORITY	37. TOPS (Y/N)	38. SIGNATURE	
APP. PAR. DISA	PP CANCEL	U/N/R	Y / N	6次年7年2月6日日子第3年8月1日日 2011年1日 1000年1日 - 1000年1日 -	e ja vikin saataan kanaa kanaa ka ja kanaa saa ka k
 RCM SIGNATURE: (Interval Changes Only) 			40. G-EAE-2 SIGNATUR (COMDTINST Chang		
41. DATE OUT: 42. CODE A / P / I	43. PRIORIT	r J/N/R	44. DATE OUT:	45. CODE A/P/D/X	46. PRIORITY U/N/R
47. TPS MANAGER	Alexandria (1985) (1985	556 a	48. TPS FINAL:	Light tract a track to achieve a matter a construction	No. 15 (15) 1996 (16) 14 (16) 15 (16) 15 (16) 15 (16) 15 (16) 16 (16) 16 (16) 16 (16) 16 (16) 16 (16) 16 (16)
Signature		Date:	Signature	r from grave Spherous, someone expessor s	Date:
49. MPC COTR: Signature		Date:	50. MPC FINAL: Signature		Date:
Remarks:			Remarks:		
		CG F	ORM 22		PREVIOUS EDITIONS OBSOLETE

Continued next page

CG-22 Continuation Sheet

This form is provided to give the originator more space to identify the deficiency and to make recommendations. When a continuation sheet is used, enter the appropriate page number, in the top, right-handed corner of the form. In blocks 1 through 4, enter the same information that is on page number one (see page 6).

		CONTINUATIO	N SHEET	 PAG	E OF
. UNIT	2. OPFAC	3. CONTROL NUMBER	4. ATA CODE		
	_				
		MANUA	L		
. MANUAL DEFICIENCY:					
RECOMMENDATION:					
				 (Use continuatio	n pages as necessa
ACMS DEFICIENCY:		ACMS		 	
<u> </u>					
RECOMMENDATION:					

Blank Page 5.A.04c

Introduction

Now that you have seen how a CG-22 Form should be filled out, practice by completing the form on page 11 using the following scenario.

Scenario

You are stationed at Coast Guard Air Station Clearwater, OPFAC # 07-20150. While reading about the operation of the T-56 engine in the Air Force T.O. 1C-130H-2-70GS-00-1, (Change 3, Date 12 Mar 96, paragraph 5-2.2 states that the engine low-speed operating range is between 9 and 30 degrees of throttle lever travel. However, paragraph 5-2.5, states that the low-speed operating range is between 9 and 40 degrees of throttle lever travel. To determine which statement is correct you look up the information in the CGTO 1C-130-1 Flight Manual. On page 1-37 and 1-38 the "Low-Speed Ground Idle Control" paragraph states that the operating range is between 9 and 30 degrees of throttle lever travel.

Continued next page

CG-22 Practice Form

Complete the form below using the information in the practice scenario given on the previous page.

AERONAUTICAL PUBLICATION CHANGE RECOMMENDATION						
1. OPFAC		2. UNIT		3. DATE INITIATED		4. CONTROL NUMBER
5. CHANGE TITLE			6. ORIGINATOR (Fi	rst, MI, Last, Rank)		7. ORIGINATOR PHONE ()
8. CG-22 TYPE Pub MPC	Comb	9. AIRCRAFT TYPE		10. PROCEDURAL (Y/N)		11. TCTO (Y/N)
12. PUBLICATION NUMB				13. REV. DATE		14. PAGE
15. ATA CHAPTER		16. PARAGRAPH		17. FIGURE		18. COMDT. CHANGE (Y/N)
19. MPC NUMBER		20. DATE		21. PAGE		22. INTERVAL CHANGE (Y/N)
23. PUBLICATION DEFIC RECOMMENDATION: 24. MPC DEFICIENCY: RECOMMENDATION:	ENCY:					
25. LOCAL QA (Signature)			26. ENGINEERING OFFICER	OR DESIGNATED RE	PRESENTATIVE (Signature)
27. PRIME UNIT REMARK	ingeneral in der	go "他的那个上小爷都不上你'说,说'你上太爷'我的你,也不知识。	antiko (h. 17. ministriko) (h. 18. k.), erre (h. 18. k.)	esta, esta esta esta esta esta esta esta esta	es Asiando Profeso (Politica) acesticando de Asiando Antigo de Asiando Antigo (Politica) de Asiando Antigo (Po	
					28. DATE OUT:	
29. ACTION CODE (A/P/I			30. PRIORITY	31. TOPS (Y/N)	32. SIGNATURE	
APP. PAR. 33. TECHNICAL SERVICE 35. ACTION CODE (A/P/I	S REMARKS:	CANCEL	U/N/R 36. PRIORITY	37. TOPS (Y/N)	34. DATE OUT: 38. SIGNATURE	
APP PAR.	DISAPP	CANCEL	U/N/R	Y/N	Charles Marting British and	on esta esta estada esta esta esta esta esta esta esta est
 RCM SIGNATURE: (Interval Changes Only)			40. G-EAE-2 SIGNATURE: (COMDTINST Changes O	nly)	
41. DATE OUT:	42. CODE A/P/D/X	43. PRIORITY U	/N/R	44. DATE OUT:	45. CODE A/P/D/X	46. PRIORITY U/N/R
47. TPS MANAGER Signature	and the second s		Date:	48. TPS FINAL: Signature		Date:
49. MPC COTR: Signature	enterioren artikologiakon errotaria.	inka make und om om www.com akaka	Date:	50. MPC FINAL: Signature Date:		
Remarks:				Remarks:		
			CG F	ORM 22		PREVIOUS EDITIONS OBSOLETE

Feedback

Your CG-22 Form should be completed as shown below. If there are errors, please review the scenario and pages 6 and 7 to correct any errors found.

AERONAUTICAL PUBLICATION CHANGE RECOMMENDATION							
1. OPFAC	2. UNIT	+02	3. DATE INITIATED		CONTROL NUMBER		
07 - 20150 5. CHANGE TITLE	CGAS Clearwa	6. ORIGINATOR (Firs		27/99 7.	ORIGINATOR PHONE		
8. CG-22 TYPE	9. AIRCRAFT TYPE	Your Name	10. PROCEDURAL (Y/N)	11	() . TCTO (Y/N)		
Pub X MPC Comb	1	IC - 130	Yes		No		
12. PUBLICATION NUMBER	-		13. REV. DATE 03 / 12		5-5		
1C-130H-2-70GS-00- 15. ATA CHAPTER	16. PARAGRAPH		17. FIGURE		B. COMDT. CHANGE (Y/N)		
76	5-2.5		21. PAGE	20	No : INTERVAL CHANGE (Y/N)		
19. MPC NUMBER	20. DATE		21. PAGE	24	. INTERVAL CHANGE (T/N)		
On page 5-5, paragi closed when the thi the coordinator). Idle Control range RECOMMENDATION: Change paragraph 5-	23. PUBLICATION DEFICIENCY: On page 5-5, paragraph 5-2.5 states that the engine low-speed ground idle switch is closed when the throttle is between 9 and 40 degrees of throttle lever travel (read on the coordinator). The C-130 Flight Manual, pages 1-37 & 1-38 state the Low-Speed ground Idle Control range is between 9 and 30 degrees. RECOMMENDATION: Change paragraph 5-2.5 to read, "The Low-Speed ground idle switch is closed when the throttle is between 9 and 30 degrees of throttle lever travel (read on the coordinator).						
24. MPC DEFICIENCY:							
RECOMMENDATION:							
25. LOCAL QA (Signature)			26. ENGINEERING OFFICE	R OR DESIGNATED REP	RESENTATIVE (Signature)		
27. PRIME UNIT REMARKS:		Lee polenty	31. TOPS (Y/N)	28. DATE OUT: 32. SIGNATURE			
29. ACTION CODE (A/P/D/X) APP PAR DISAPP	CANCEL	30. PRIORITY U/N/R	Y/N	32. SIGNATURE			
33. TECHNICAL SERVICES REMARKS: 34. DATE OUT:							
35. ACTION CODE (A/P/D/X)	CANCEL	36. PRIORITY U/N/R	37. TOPS (Y/N) Y/N	38. SIGNATURE			
39. RCM SIGNATURE:	CANCEL	G/N/R	40. G-EAE-2 SIGNATURE				
(Interval Changes Only) 41. DATE OUT: 42. CODE	43. PRIORIT	·	(COMDTINST Changes 44. DATE OUT:		46. PRIORITY		
A/P/D/		J/N/R		A/P/D/X	U/N/R		
47. TPS MANAGER Signature		Date:	48. TPS FINAL: Signature		Date:		
49. MPC COTR: Signature	Salatan karalah dan pertemberah dan pertembah selek	Date:	50. MPC FINAL: Signature	enter entre de la compansión de la compa	Date:		
Remarks:			Remarks:				
		CG F	ORM 22		PREVIOUS EDITIONS OBSOLETE		

Introduction

The Recommendation for Change of Publication (AF Form 847) is used to correct errors which affect the meaning of instructive information of procedures in all Coast Guard aircraft flight manuals (-1 series).

Availability of Form

The AF Form 847 can be obtained from your shop supervisor or the Quality Assurance (QA) office. If you have access to a Coast Guard standard work station, this form is available on the SAE Forms Plus Laser Library or on the Jet Form Filler on standard work station III.

Process

The aircrew member/mechanic who originates an AF Form 847 fills out a draft copy and submits it to the unit's QA office. The proposal is reviewed by QA personal for validity and technical accuracy. They then make necessary correction without changing the intended meaning of the original proposal. Using a CG standard work station, QA personnel transfer the information onto the computer version of the form and print out what becomes known as the original. You, the originator, will be asked to review this original to ensure it still says what you intended it to say.

Signatures

Once the originator and QA are in agreement, the AF Form 847 is signed by the originator and the QA Officer. It is then forwarded to the unit Engineering Officer for local approval.

Distribution

After the Engineering Officer approves the AF Form 847, it is returned to QA for submission to appropriate aircraft Prime Unit, Commandant (G-SAE), Commandant (OCA), and appropriate aircraft Standardization Unit. For distribution details refer to Aeronautical Engineering Maintenance Management Manual COMDINST M13020.1 (series)

Continued next page

AF Form 847 Block Entry Table

The following table contains remarks for the blocks that are required to be completed prior to submitting the AF Form 847 to the Quality Assurance Office. See example on the next page.

Block #		Entry/Remarks				
Date	Enter the date which you are submitting this form.					
Unit	Enter you units OP	Enter you units OPFAC Number.				
Number						
1	Enter the Publication	n Number.				
2	Enter the T.O.'s Ba	sic Date. Located on the cover page.				
3	Enter the Revision/	Change Date, located on the cover page.				
4	Enter the affected P	age Number you want changed.				
5	Enter the Major Par	agraph Title in this block, it will be in bold black lettering.				
6	Enter the Sub-Parag	Enter the Sub-Paragraph Title in this block if one applies.				
7	Enter the Item Number in this block.					
8	Enter whether you want to change or delete a paragraph, item or figure. State how it presently reads, and how you want it to read.					
		•				
9	Enter whether you wish to change or to delete a paragraph, item or figure. State how you want it to read.					
10	Enter whether you are adding a new Paragraph, Sentence, Item or Figure. State how you want it to read. This block is used in conjunction with block 9.					
11	Enter you reason for recommending a Change, Addition or Deletion. State any adverse operational effects that your change will correct if instituted.					
Organ- ization	Organ- Enter your units name and address.					
Name, G	rade and Signature	Self-explanatory				

Example of a Completed AF Form 847

The Following is a example of a completed AF Form 847 that was submitted by Aviation Technical Training Center.

CFlight Publications 17 May 1995 78-61300
Publication Number (1)
Page Number (4) Major Paragraph Title (5) 1-75/76 AC Power Distribution, 1500 Series, Figure 1A-49 Sub-Paragraph Title (6) LH AC Bus, Pilot's Upper Circuit Breaker Panels [8] Change Delete so much of Paragraph Item X Figure As Reads
1-75/76 AC Power Distribution, 1500 Series, Figure 1A-49
Sub-Paragraph Title (6) LH AC Bus, Pilot's Upper Circuit Breaker Panels [Item Number (7)] (8)
As Reads
Figure 1A-49 shows circuit breakers for the windshield washer system.
To Read
Delete the reference to the windshield washer circuit breakers.
\cdot
After Present (9) Sentence Item
As Reads
Add New (10) Paragraph Sentence Item Figure
To Read
Reason For Recommended Change, Addition or Deletion (Include Adverse Operational Effects) (11)
CGTCTO HC130-930001 directs units with 1500 series C-130s to remove the windshield washer system.
Therefore the reference to these circuit breakers needs to be eliminated.
Organization
Aircraft Repair and Supply Center, Elizabeth City NC. 27909
Type Name and Grade of Originator Signature
Stan Lane AVTC Your Signature

Introduction

Now that you have seen how an AF Form 847 is filled out, practice by completing the form on page 17 using the following scenario.

Scenario

You are stationed at Coast Guard Air Station Sacramento OPFAC #11-20290. You are reading the Omega Navigation System paragraph in CGTO 1C-130-1 flight manual. In the Search Mode Operation subparagraph on page 1-474, you notice that item #11 reads as follows:

FIRST TURN DIRECTION-ENTERED Press L for left turn or R for right turn.

Having just graduated from Basic Air Navigation School, you know the L or R for left or right turns cannot be entered without first pressing the R push button to blank out the right display, therefore the search cannot be used.

Your recommendation is to change item 11 to read as follows:

FIRST TURN DIRECTION-ENTERED Press the R push button to blank the right display, then press the R push button for right turn or L push button for left turn.

The basic date of CGTO 1C-130-1 is 6 November 1986.

Continued next page

AF Form 847 Practice Form

Complete the form below using the information in the practice scenario on the previous page.

Recommendat	ion For Change	Of Publication	Date	Unit Number		
(Flight Publications)						
Publication Number (1)	Basic Date (2)	Revision/Change Date	(3)	(Reserved)		
Page Number (4)	Major Paragraph Title	: (5)		-		
Sub-Paragraph Title (6)				Item Number (7)		
(8) Change	Delete so much of	Paragraph	Item	Figure		
As Reads				 -		
	•					
To Read		Nevi.				
A.S. D. 4.00						
After Present (9)	Sente	nce Item				
As Reads						
Add New (10)	Paragraph [Sentence	Item	Figure		
To Read	танадлары	Sentence	Reni	1 iguic		
Reason For Recommended	l Change, Addition or l	Deletion (Include Adve	rse Opera	ational Effects) (11)		
				:		
Organization						
Type Name and Grade of (Originator	Signature	····			
••	Č					
		· · · · · · · · · · · · · · · · · · ·				

Feedback

Your AF Form 847 should be completed as shown below. If there are errors, review the scenario and pages14 & 15. Correct any errors found.

Recommendation For Change Of Publication (Elight Publications) Date Todays Unit Number 20290					
	(Flight Publications)				
Publication Number (1) CGTO 1C-130-1	Basic Date (2) 6 Nov. 1986	Revision/Change Date (3) (Reserved)		
Page Number (4) 1-474	Major Paragraph Title	e (5) Omega Navigation S	vstem (I TN-211)		
Sub-Paragraph Title (6)	Search Mode Operation		Item Number (7)		
(8) X Change	Delete so much of		Item Figure		
As Reads			Tigute		
FIRST TURN DIRECTIO	N-ENTERED				
Using Push button, pr	ess L for left turn o	or R for right turn.			
To Read			· · · · · · · · · · · · · · · · · · ·		
FIRST TURN DIRECTIO		. 11 1			
or L for left turn.	on to blank the righ	t display, then press the	ne R button for right turn		
of L for left turn.			•		
After Present (9)	Sente	nce Item			
As Reads					
Add New (10) I	Paragraph	Sentence	Item Figure		
To Read					
Reason For Recommended Change, Addition or Deletion (Include Adverse Operational Effects) (11)					
L or R for left or right turn	cannot be entered with	hout first pressing the R p	ash button to blank the right		
display, therefore the search		nout inst prosoning the it pe	outon to blank the right		
Organization					
Coast Guard Air Station Sa	acramento				
Type Name and Grade of C	Originator	Signature			
Your Name and Rate		Your Signature			

Questions

Answer the following question on the publication improvement system.

- 1. Which form would be used to request a change to an ACMS Maintenance Procedure Card?
- 2. Which form would be used to request a change to a Flight Manual?

5.A.04c Publication Improvement System Self-Quiz Feedback

Feedback

Compare you answers to the feedback provided below. If you had trouble with the Self-Quiz, please review the appropriate page of this reading assignment.

Question	Answers	Reference
1.	CG-22	5
2.	AF Form 847	13

Syllabus 5.A.04c

Performance

Submit a publication change request.

Performance Objective 1

Given a blank CG-22 form and a maintenance publication or a ACMS/MSR car containing incorrect information, **COMPLETE** the CG-22 form with the required information IAW the Aeronautical Engineering Maintenance Management Manual, COMDINST M13020.1 (series), and the CG-22 Process Guide, CGTO PG-85-00-20.

Performance Objective 2

Given a blank AF Form 847 and a flight manual containing incorrect information, **COMPLETE** the form with the required information IAW the Aeronautical Engineering Maintenance Management Manual, COMDINST M13020.1 (series).

5.A.04c Blank Page

Objectives

To successfully complete this assignment, you must study the text and master the following objectives:

- ? **DEFINE** the term inspection.
- ? **STATE** the purpose of aircraft inspections.
- ? **STATE** the two categories of aircraft inspections.
- ? **STATE** the manual that contains specific inspection requirements for each aircraft type.
- ? **DEFINE** the term routine inspection.

1

- ? **IDENTIFY** routine and special inspections.
- ? **STATE** the form used to schedule special inspections.

References

The information contained in this assignment can be found in the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).

5.B.01c Overview

Introduction

This assignment introduces you to the different types of inspections performed on Coast Guard aircraft.

In This Assignment

In this assignment we will discuss the following topics:

Subject	Page
Introduction to Aircraft Inspections	3
Routine Inspections	4
Preflight Inspection	5
Thruflight Inspection	6
Postflight Inspection	7
Hourly/Weekly Inspection	8
ACMS Scheduled Inspections	9
Special Inspections	10
Documenting Special Inspections	13
Aircraft Inspections Self-Quiz	17
Aircraft Inspections Self-Quiz Feedback	20
Syllabus	21

Introduction

The Coast Guard's Aviation Computerized Maintenance System (ACMS) includes all applicable inspection requirements for aircraft, ground support equipment, and special equipment. These inspections or tasks are completed and accounted for on an individual basis. This allows operational and maintenance flexibility with optimum use of staff-hours.

Definition of Inspections

Inspections, varying in scope, purpose, and frequency, are periodic or on-condition maintenance checks performed on assigned aircraft.

Purpose of Inspections

These inspections ensure that the aircraft are maintained in a safe, serviceable condition.

Inspection Categories

Inspections performed on US Coast Guard aircraft are grouped into the following categories:

- Routine
- Special

Inspection Criteria

For specific inspection requirements for each aircraft type, refer to the Aeronautical Engineering Maintenance Management manual, COMDTINST M13020.1 (series).

AVT2

Definition

Routine inspections are maintenance checks that are accomplished on a regular or scheduled basis.

Inspections Considered to be Routine

The following inspections are considered to be of a routine nature:

- Preflight
- Thruflight
- Postflight
- Hourly/Weekly
- ACMS Maintenance Due List (MDL)

Purpose of a Preflight Inspection

The preflight inspection consists of checking the aircraft for flight preparedness by performing visual examinations and operational tests to discover defects and mal-adjustments which, if not corrected, could adversely affect safety of flight or mission accomplishment.

Preflight Inspection Characteristics

The Preflight Inspection consists of the following characteristics:

- Accomplished prior to the first flight of the day
- Remains effective for 24 hours provided no subsequent maintenance has been performed

Purpose of a Thruflight Inspection

The Thruflight Inspection is accomplished as a turn-around inspection on selected types of aircraft listed in the Aeronautical Engineering Maintenance Management manual, COMDTINST M13020.1 (series).

Thruflight Inspection Characteristics

The Thruflight Inspection consists of the following characteristics:

- Accomplished prior to take off on the second and each subsequent flight of the day
- Completion of a thruflight satisfies the requirements of a preflight. Therefore preflight certification can be documented on the CG-4377 Part I upon completion.

Purpose of a Postflight Inspection

The purpose of a postflight inspection is to ensure that the aircraft is suitable for continued flight.

Characteristics of a Postflight

- A postflight inspection consists of the following characteristics:
- Accomplished after the last flight of the flying period
- A visual inspection of certain components, systems, or areas, to ensure that no defects exist which would be detrimental to further flight
- Discloses defects requiring correction before deterioration into major maintenance items
- Inspection frequency ranges from once a day to once per week depending on the type of aircraft
- Performed on selected types of aircraft listed in the Aeronautical Engineering Maintenance Management manual, COMDTINST M13020.1 (series).

Purpose of an Hourly/Weekly Inspection

These inspections are designed to provide servicing and verification of satisfactory functioning of critical systems/components at frequent intervals.

Characteristics of an Hourly/Weekly Inspection

An Hourly/Weekly inspection consists of the following characteristics:

- Frequency of these types of inspections prohibits the use of the computer for scheduling
- Procedures for performing these inspections are located in the ACMS Maintenance Procedure Cards

Purpose of ACMS Scheduled Inspections

These inspections ensure that a thorough examination of all aircraft systems and components is accomplished on a scheduled basis.

Types of ACMS Scheduled Inspections

These inspections consist of the following types:

- Operations
- Calendar
- Hourly
- Cycles
- Landings

Characteristics of ACMS Scheduled Inspections

These inspections consist of the following characteristics:

- Procedures for performing these inspections are located in the ACMS Maintenance Procedure Cards
- Appear on the ACMS Maintenance Due List (MDL) for action

AVT2

Definition

Special inspections are certain additional inspections, distinct in frequency from routine inspections, which are conditional upon operational environment, specific incidents, or other circumstances requiring inspections.

Examples of Special Inspections

The number of special inspections required for all aircraft and circumstances are too numerous to list. A few examples are given in the following items to illustrate their distinction from routine:

Overtemperature, Overspeed, Overtorque, Metal Contamination, Hard Landing, Lightning Strike Inspections,

(etc): These types of special inspections define the specific maintenance actions taken based upon the circumstances of the event. Procedures for performing these types of inspections have been written into existing manuals and the Aviation Computerized Maintenance System as the result of actual experiences or a high probability that the event will happen.

<u>Time Compliance Technical Order (TCTO)/Message Time</u>
<u>Compliance Technical Order (Message TCTO):</u> A TCTO is normally generated by a reported safety-of-flight incident or failure trend and is issued to perform inspections of an aircraft component or system. TCTO's will appear on the ACMS Maintenance Due List (MDL) report for action. A TCTO provides detailed information on how to perform the inspection.

Aircraft Damage Sustained as a Result of a Mishap: The commanding officer will ensure that all damage sustained is properly inspected by competent maintenance personnel and that the complete extent of the damage is reported. This inspection should not be limited solely to the damaged area. A qualified maintenance officer should perform a complete evaluation prior to releasing the aircraft for flight.

Continued next page

Examples of Special Inspections (Continued)

Aircraft Damage Sustained as a Result of Flight Through

<u>Volcanic Ash:</u> Inadvertent flight through volcanic ash clouds is an infrequent but very real and significant hazard. Numerous commercial and military aircraft have sustained tremendous damage at jet airway altitudes hundreds of miles from active volcanoes. If flight through a volcanic ash cloud is known or suspected, contact Commandant (G-SEA) for decontamination procedures. Depot and Original Equipment Manufacturer (OEM) support will most likely be required.

Special Inspection Due to Maintenance: Some maintenance procedures require special inspections be performed as a follow up check. This inspection assures that the maintenance procedure was performed correctly and/or that the assembly or equipment is not defective.

Example: After installing the Main Rotor Head (MRH) on a HH-60J helicopter the MPC requires a torque check be performed on the MRH shaft nut bolts after 9-11 flight hours.

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Introduction

The administrative process for documenting special inspections should be the same at all units but may vary slightly. Generally, you should document special inspections as outlined in the following tables.

Documenting a Special Inspection Due to a Specific Incident When an incident occurs that requires a special inspection, the following steps should be performed to document performance of the inspection.

Step	Action		
1	Write up the discrepancy describing the incident.		
	If	Then	
	the incident occurred during flight	write up the discrepancy on the CG-4377 Part III	
	the incident did not occur during flight	write up the discrepancy on the CG-4377B	
2	Perform the inspection in accordance with the applicable maintenance publication.		
3	Sign off the discrepancy written up in Step 1 and complete any applicable MPC's.		
4	Follow the appropriate instruction below depending on the outcome of the inspection.		
	If Then		
	any problems or defects were found	write up the discrepancies on the CG-4377B for further maintenance	
	no problems or defects were found	you are done	

Continued next page

Scheduling a Special Inspection Due to Maintenance After installing the MRH on the HH-60J helicopter, a torque check is required to be performed every 10 flight hours until the torque stabilizes, or for a maximum of four times. This type of special inspection is scheduled on the CG-5181 in the Special Inspections/Services Record section as illustrated in the example on the following page (refer to the example while reading the table).

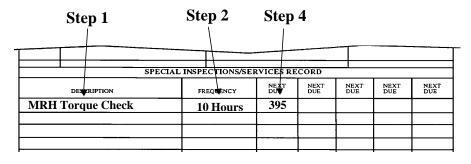
Special Inspection Step-Action Table

Schedule special inspections by performing the steps in the following table:

Step		Action		
1		Enter the description of the inspection (MRH Torque Check)		
2	Ente	Enter the frequency of the inspection (10 hours)		
3	Calculate the Next Due hours by performing the following steps:			
		Step Action		
	1 Round off the aircraft flight hours to the nearest whole number		_	
		2	Add 10 hours to the number from Step 1	
4	Enter the number from Step 3 in the first available Next Due block (from the left)			

Continued next page

Example of Scheduling a Special Inspection Due to Maintenance In the following example the aircraft had 384.5 flight hours at the time the MRH was installed. The number 384.5 is rounded up to 385 and then 10 hours is added to it, therefore 395 is entered in the Next Due block to schedule the inspection. Refer to the step-action table on the proceeding page.



Documenting
Performance of a
Special
Inspection Due to
Maintenance

When the inspection in the example above becomes due, the technician will perform the following steps to document performance of the inspection:

Step	Action		
1	Write up a discrepancy on the CG-4377B, requiring the inspection to be performed		
2	Perform the inspection in accordance with the applicable maintenance publication		
3	Document completion of the inspection by performing the applicable step below		
	If Then		
	the torque is stable	sign off the discrepancy written up in Step 1 and notify your supervisor	
	the torque is not stable	sign off the discrepancy written up in Step 1 and schedule another one by adding 10 hours to the total aircraft flight hours and enter that number in the next blank Next Due block on the CG-5181	

5.B.01c Blank Page

Questions

Answer the following questions on aircraft inspections:

1. What is the definition of an inspection?

- 2. The purpose of aircraft inspections is to _____
- 3. What two categories are aircraft inspections grouped into?
 - a. _____
 - b. _____
- 4. Specific inspection requirements for each aircraft type can be found in what manual?
- 5 What is the definition of routine inspections?

Continued next page

Questions	
(Continued))

6. Match each inspection listed in column B to the appropriate type of inspection listed in column A. Use each letter only once.

	Column A	Column B	
	,, 1. Routine Inspection	a. Hourly/Weekly	
	,, 2. Special Inspection	b. Lightning Strike	
		c. MRH Torque Check	
		d. Postflight	
		e. Preflight	
		f. TCTO	
7.	Which routine inspection is performed by the day?	pefore the first flight of	
8.	On which ACMS report will TCTO's appear for action?		
9.	If a maintenance procedure requires a foinspection, it should be scheduled on the	* *	

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Feedback

Compare your answers to the feedback provided below. If you had trouble with this self-quiz, please review the appropriate section of this assignment.

Question	Answer	Reference
1.	A periodic or on-condition maintenance check performed on assigned aircraft	3
2.	ensure the aircraft are maintained in a safe, serviceable condition	3
3.	a. Routine Inspectionsb. Special Inspections	3
4.	Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)	3
5.	Maintenance checks that are accomplished on a regular or scheduled basis.	4
6.	1. a, d, e 2. b, c, f	4 10, 11
7.	Preflight	5
8.	ACMS Maintenance Due List	10
9.	CG-5181	14

Syllabus 5.B.01c

Performance

PERFORM special inspections of aircraft and aviation equipment.

Performance Objective 1

Given the necessary equipment and publications, **PERFORM** special inspections of aircraft IAW the applicable publication.

______A

NOTE

The number and types of special inspections are too numerous to provide a detailed reference list for each aircraft type. Instructions for performing special inspections are covered by the ACMS Maintenance Procedure Cards, the aircraft's maintenance publications, and issued Time Compliance Technical Orders (TCTO's).

Performance Objective 2

Given the necessary equipment and publications, **PERFORM** special inspections of aviation equipment IAW the applicable publication.

_____A

NOTE

The number and types of special inspections are too numerous to provide a detailed reference list for all aviation equipment. Instructions for performing special inspections are covered by the ACMS Maintenance Procedure Cards, the equipment maintenance publications, and issued Time Compliance Technical Orders (TCTO's).

5.B.01c Blank Page

Objectives

To successfully complete this assignment, you must study the references and master the following objectives:

- **STATE** the purpose of a Time Compliance Technical Order (TCTO).
- **STATE** the organization that can authorize modifications of Coast Guard aircraft.
- **DEFINE** the Aviation Computerized Maintenance System (ACMS) reports that TCTO's appear on and the purpose.
- **DEFINE** the characteristics of TCTO's.
- **DEFINE** the characteristics of Special Compliance Technical Orders (SCTO's)

References

The information that you must study is contained in the following references:

- Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)
- Aeronautical Engineering TCTO Process Guide, CGTO PG-85-00-40

1

5.B.02c Overview

Introduction This assignment introduces you to the process of making modifications to aircraft and aviation equipment. **Notice to Student** There is no information presented in this pamphlet, however, you must read and study the material in the references to prepare for the Self-Quiz, Pamphlet Review Quiz, and the EOCT. In This This assignment contains the following: **Assignment** Subject Page Aircraft Modifications Self-Quiz......5

Before You Begin

To complete this assignment, it is recommended that you do the following:

- Get permission from the reference custodian to use the documents
- Get a current copy of each of the references listed, usually from Quality Assurance
- Ensure that no pages in the references are missing or damaged
- DO NOT write in references or remove any pages
- Return the references to the custodian when you have finished the lesson

Continued next page

How to Proceed

To successfully complete this assignment, follow the steps listed below:

Step	Action	
1	Read the objectives on page 1	
2	Read and study the material in each reference listed below and ensure that you can fulfill each objective:	
	Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)	
	- Chapter 5, Directives and Publications, (Paragraph on TCTO's) Chapter 8 Aircraft Inspections (Section on Special)	
	 Chapter 8, Aircraft Inspections, (Section on Special Inspections) 	
	Aeronautical Engineering TCTO Process Guide, CGTO PG-85-00-40	
	Chapter 1, Coast Guard TCTO'sChapter 2, Coast Guard Message TCTO's	
	 Chapter 3, Contractor Produced Coast Guard TCTO' Chapter 4, TCTO Guidelines 	
	- Chapter 5, CG Special Compliance Technical Order's (SCTO), (TOPS 1)	
3	Take the self-quiz and review the feedback. If you have no trouble with the self-quiz, you should be well prepared for the pamphlet review quiz and the EOCT.	

O	uestion	16
w	uesuui	13

Answer the following questions on aircraft modifications:

1	What is the manner of a Time Counties on Technical Orders
1.	What is the purpose of a Time Compliance Technical Order?
2.	To track compliance of a TCTO, it will appear on which ACMS report?
3.	Which digits in a TCTO number indicate the applicable ATA chapter?
4.	Which Coast Guard organization can authorize modifications of aircraft?
5.	What type of TCTO is used for rapid dissemination of information, generally of an urgent or safety-of-flight nature?
6.	A Special Compliance Technical Order (SCTO) provides a means to implement aircraft, Mandatory Special Requirements (MSR), and Avionics Tracking System (ATS) changes which are not

Feedback

Compare your answers to the feedback provided below. If you had trouble with this self-quiz, please review the appropriate section in the applicable reference.

Question	Answer	Reference
1	A TCTO generally requires a physical change to an aircraft or a special inspection	COMDTINST M13020.1 (series) Page 5-3
2	Maintenance Due List (MDL)	COMDTINST M13020.1 (series) Page 5-4
3	Second and Third	COMDTINST M13020.1 (series) Page 5-4
4	Commandant (G-SEA)	COMDTINST M13020.1 (series) Page 5-4
5	Message TCTO	COMDTINST M13020.1 (series) Page 5-4
6	time sensitive	CGTO PG-85-00-40 Page 5-1

Syllabus 5.B.02c

Performance

PERFORM authorized modifications of aircraft and aviation equipment.

Precautions

You must be aware of the following caution and note before modifying aircraft or aviation equipment.

CAUTION

Only authorized modifications will be made on aircraft and aviation equipment. TCTO's can be authorized only by Commandant (G-SEA).

NOTE

TCTO's will be accomplished using standard aircraft maintenance practices and following the step-by-step procedures published in the TCTO.

Performance Objective 1

Given the necessary equipment, directions, and publications, **PERFORM** authorized modifications of aircraft IAW an issued TCTO and applicable publications.

	_

Performance Objective 2

Given the necessary equipment, directions, and publications, **PERFORM** authorized modifications of aviation equipment IAW an issued TCTO and applicable publications.



5.B.02c Blank Page

Objectives

To successfully complete this assignment, you must study the text and master the following objectives:

- **LIST** the six general troubleshooting guidelines in the proper order.
- **STATE** in writing the purpose of performing a visual inspection during the troubleshooting process.
- **STATE** in writing what you should do if unrelated discrepancies are found while troubleshooting.
- **STATE** in writing the purpose of performing an operational check during the troubleshooting process.
- **STATE** in writing what troubleshooting step includes verifying the suspect component.
- **LIST** a minimum of six of the common methods used to verify the condition of suspect components.
- **LIST** five of the more common types of corrective actions used to correct a malfunction.
- **STATE** in writing the purpose of conducting a final operational check during the troubleshooting process.

References

This assignment is original material designed and developed by the Subject Matter Specialists at AVTECHTRACEN and has no reference number or publication name.

5.B.GTG Overview

Introduction

This assignment is an introduction to the General Troubleshooting Guidelines that will assist you during the actual performance of the troubleshooting qualifications. Knowledge of these guidelines is essential to becoming a competent troubleshooter.

In This Assignment

This assignment contains the following:

Subject	Page
Five General Troubleshooting Steps	3
Step 1 - Visual Inspection	4
Step 2 - Operational Check	5
Step 3 – Classify the Malfunction	6
Step 4 - Isolate and Locate the Malfunction	7
Step 5 - Correct the Malfunction	9
Step 5 - Conduct Final Operational Check	10
General Troubleshooting Guidelines Self-Quiz	11
General Troubleshooting Guidelines Self-Quiz Feedback	14

Introduction

Troubleshooting is one of the most valued skills in the aviation workforce. There are standard time-proven steps used for troubleshooting aircraft systems. These steps are essential and apply to both mechanical and electrical systems.

Five General Troubleshooting Steps

The following table lists the five general troubleshooting steps that are used, in sequence, when troubleshooting aircraft systems.

Step	Action
1	Conduct a visual inspection of the malfunctioning system.
2	Perform an operational check of the malfunctioning system.
3	Classify the Malfunction.
4	Isolate and Locate the malfunctioning component/wire.
5	Correct the malfunction.
6	Conduct a final operational check of the repaired system.

Each of the six troubleshooting steps are listed in more detail on the following pages.

A visual inspection is performed to identify any obvious discrepancies that could be the actual cause of a malfunction, or to identify discrepancies that could possibly cause further damage to equipment or injury to personnel.

Visual Inspection Guidelines

The table below lists some of the more common guidelines that you should follow when performing a visual inspection:

If visually inspecting	Then check for
circuit protectors	tripped, overheating, security, cleanliness (corrosion), mechanical condition.
control switches	position, security, overheating, cleanliness (corrosion), mechanical condition.
equipment	security, cleanliness (corrosion), overheating, burnt odor, mechanical condition, missing parts (hardware).
mechanical linkages	binding, interference, distortion, excessive play, missing hardware, incorrect assembly.
wires	signs of overheating, security, chafing, cleanliness (corrosion), proper routing.
lines/connections	leaking (fluids, air, gases), security, routing.
reservoirs	proper fluid levels, correct fluid type, overheated fluid, leaks, proper configuration of valves, security of caps/plugs.

Unrelated Discrepancies

Unrelated discrepancies that are found during your visual inspection should be entered in the aircraft's logbook as a separate discrepancy.

An operational check of the malfunctioning system should be performed IAW applicable publications to gather as much additional information as possible about the current state of the system. This information will assist you in making logical decisions as you move through the General Troubleshooting steps.

Examples of Malfunction Indications

Listed below are some of the more common examples of malfunction indications that should be monitored and/or noted:

If the indication involves	Then check for
speed, temperature, or pressure	fluctuations, lack of indication, excessive or disproportional indications, etc.
sequence	number of cycles, completion, duration, etc.
illumination	intensity, lack of, flashing or flickering, etc.
abnormal current flow	dimming of lights, slowing of motors, overload warnings, overheated battery(s), chattering of relays, etc.
arcing/sparking	flashes, sounds of welding, burning odor, etc.
unusual noises	grinding, whining, scraping, rubbing, etc.
vibrations	vibrating controls (yoke, collective, cyclic, throttles), equipment, lines, cables, etc.

Unrelated Discrepancies

Unrelated discrepancies that are found during the operational check should be entered in the aircraft's logbook as a separate discrepancy.

Classify the Malfunction is the process of identifying the malfunction as either electrical or mechanical in reference to any findings in the previous steps.

Classification Examples

Listed Below are examples of malfunction classifications:

If classified as	Then it includes
Mechanical	Pumps, linkages, actuators, drives, valves, etc.
Electrical	Switches, sensors, wires, relays, motors, etc.

Referencing **Publications**

Classifying the malfunction enables you to reference the appropriate section of the applicable publication.

Isolate the Malfunction Description

Isolating the malfunction is the process of narrowing down from a list of possible components to a list of suspect components. This is done by eliminating all of the components/wires that are determined to be functioning normally during the Operational Check, (Step 2).

Locate the Malfunction Description

Locating the malfunction is done by physically locating the suspected malfunctioning component/wire and then performing a visual inspection on it, (Step 1).

Examples of Locating Methods

Listed below are examples of the different types of publications used to locate a component or wire, depending on aircraft type:

- Avionics Operation and Maintenance Manual
- Avionics System Maintenance Manual
- Fault Isolation Manual (FIM)
- General System (GS)
- Illustrated Parts Breakdown or Catalog (IPB) or (IPC)
- Job Guide Manual (JGM)
- Maintenance Manuals (MM)
- Maintenance Procedure Cards
- Maintenance Procedures Manual
- Overhaul Manual
- Principals Of Operation Manual
- Structural Repair Manual
- Testing And Troubleshooting Manual
- Wiring Diagram Manuals (WDM)

Continued next page

5.B.GTG Step 4 - Isolate and Locate the Malfunction (Continued)

Verifying Suspect Components

After you have compiled your list of suspect components and performed a visual inspection on each, verify their condition as either faulty or serviceable IAW the applicable publication.

Examples of Verifying Methods

Listed below are examples of some common methods used to verify the condition of components:

- Calibration checks
- Comparison checks (dual systems)
- Continuity checks
- Dimensional checks
- Elapsed time checks
- Megger checks (insulation breakdown)
- Pressure/Vacuum checks
- Rotational force checks
- Self tests
- Spring scale checks
- Temperature checks
- Tension checks
- Voltage checks

After the malfunctioning component/wire has been identified and verified as faulty, the malfunction should be corrected IAW the applicable publications.

Corrective Action

The applicable publication will guide you to the appropriate corrective action for the given malfunction, depending on your findings from Isolate and Locate, (Step 3).

Examples of Corrective Actions

Listed below are examples of some of the more common types of corrective actions used to correct a malfunction:

- Adjust
- Calibrate
- Repair
- Replace
- Re-set

The repaired system must be powered-up and operated to verify that the malfunction has been corrected IAW the applicable publications.

Final Operational Check Decision Table

The following table will help you decide whether you were successful at troubleshooting the applicable system:

If	Then
the repaired system is functioning normally IAW the applicable publication.	ensure ALL paperwork and aircraft logbook entries are complete.
the malfunction has NOT been corrected or a new discrepancy has been identified.	refer to Step 1 of the General Troubleshooting Guidelines.

Questions

1.	List in order, the five general troubleshooting guidelines.
Ste	ep 1;
Ste	ep 2;
Ste	ep 3;
Ste	ep 4;
Ste	ep 5;
Ste	ep 6;
	The purpose of performing a visual inspection during ubleshooting is to
	, or to
	If unrelated discrepancies are found while troubleshooting you ould
	·
	The purpose for performing an operational check during ubleshooting the process is to
5.	When you classify the malfunction, you are making the distinction between an or malfunction.
6.	What troubleshooting step includes verifying the suspect components?

5.B.GTG General Troubleshooting Guidelines Self-Quiz (Continued)

Questions
(Continued)

7. List a minimum of six of the common methods used to verify the condition of suspect components.
1
2
3
4
5
6
8. List five of the more common types of corrective actions used to correct a malfunction.
1
2
3.

9.	The purpose of conducting a final operational check during the
tro	ubleshooting process is to

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5.B.GTG General Troubleshooting Guidelines Self-Quiz Feedback

Feedback

Compare your answers to the feedback provided below. If you had trouble with this self-quiz, please review the appropriate section of this assignment.

Question	Answer	Reference
1.	Step 1; Conduct a visual inspection Step 2; Perform an operational check Step 3; Classify the malfunction Step 4; Isolate the malfunctioning component/wire Step 5; Correct the malfunction Step 6; Conduct a final operational check	3
2.	identify any obvious discrepancies that could be the actual cause, or to identify discrepancies that could possibly cause further damage to equipment or injury to personnel.	4
3.	enter the discrepancy in the aircraft's logbook.	4 or 5
4.	gather as much additional information as possible about the current state of the system	5
5.	Electrical or mechanical	6
6.	Isolate and Locate the malfunction.	8

Continued next page

General Troubleshooting Guidelines Self-Quiz Feedback (Continued)

Feedback (Continued)

The following is a continuation of the self-quiz feedback:

Question	Answer	Reference
7.	Any six of the following are acceptable: Calibration checks Comparison checks (dual systems) Continuity checks Dimensional checks Elapsed time checks Megger checks (insulation breakdown) Pressure/Vacuum checks Rotational force checks Self tests Spring scale checks Temperature checks Tension checks Voltage checks	8
8.	Adjust Calibrate Repair Replace Re-set	9
9.	verify that the malfunction has been corrected IAW the applicable publications.	10

For More Information

More detailed information about specific troubleshooting procedures may be found in the "Troubleshooting" section of the applicable aircraft maintenance publication. However, not all maintenance publications contain a troubleshooting section. 5.B.GTG Blank Page

Syllabus 5.B.01 **Performance** TROUBLESHOOT AC distribution system discrepancies to the LRU/wire level. **Performance** Given an AC distribution system discrepancy and General **Objective 1** Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an AC distribution system discrepancy and necessary **Objective 2** equipment, **PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-1, Chapter 24 MPC Index, Chapter 24 **HH-60J** A1H60HA-420-100 MPC Index, Chapter 24 HC-130H 1C-130H-2-24GS-00-1 MPC Index, Chapter 24 **HU-25A**

Continued next page

1U-25A-2, Chapter 24

MPC 102.0

Given an AC distribution system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 24
- 1H-65A-2-2, Chapter 24
- 1H-65A-4, Chapter 24

HH-60J

- A1-H60HA-420-100
- A1-H60HA-420-200
- A1-H60HA-420-400

HC-130H

- 1C-130H-4
- 1C-130H-2-24FI-00-1-1
- 1C-130H-2-24FI-00-1-2
- 1C-130H-2-24JG-20-1

HU-25A

- 1U-25A-2, Chapter 24
- 1U-25A-4, Chapter 24

Given an AC distribution system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-420-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-24FI-00-1-1
- 1C-130H-2-24FI-00-1-2
- 1C-130H-2-24JG-20-1
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an AC distribution system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

НН-65А	
• 1H-65A-2-1, Chapter 24	
• MPC Index, Chapter 24	
НН-60Ј	
• A1-H60HA-420-100	
• MPC Index, Chapter 24	
НС-130Н	
• 1C-130H-2-24GS-00-1	
• MPC Index, Chapter 24	
HU-25A	Ø
• 1U-25A-2, Chapter 24	
• MPC 102.0	

Syllabus 5.B.02 **Performance** TROUBLESHOOT DC distribution system discrepancies to the LRU/wire level **Performance** Given a DC distribution system discrepancy and General **Objective 1** Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a DC distribution system discrepancy and necessary **Objective 2** equipment, **PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-1, Chapter 24 MPC Index, Chapter 24 **HH-60J** A1H60HA-420-100 MPC Index, Chapter 24 HC-130H 1C-130H-2-24GS-00-1 MPC Index, Chapter 24 **HU-25A**

Continued next page

1U-25A-2, Chapter 24

MPC 102.0

Given a DC distribution system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 24
- 1H-65A-2-2, Chapter 24
- 1H-65A-4, Chapter 24

HH-60J

- A1-H60HA-420-100
- A1-H60HA-420-200
- A1-H60HA-420-400

HC-130H

- 1C-130H-4
- 1C-130H-2-24FI-00-2
- 1C-130H-2-24JG-30-1
- 1C-130H-2-24GS-00-1

HU25A

- 1U-25A-2, Chapter 24
- 1U-25A-4, Chapter 24

Given a DC distribution system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- H-65A-2-1, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-420-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-24FI-00-2
- 1C-130H-2-24JG-30-1
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a DC distribution system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

H	H-65A	
•	1H-65A-2-1, Chapter 24	
•	MPC Index, Chapter 24	
HI	H-60J	
•	A1-H60HA-420-100	
•	MPC Index, Chapter 24	
H	С-130Н	
•	1C-130H-2-24GS-00-1	
•	MPC Index, Chapter 24	
H	U-25A	
•	1U-25A-2, Chapter 24	
•	MPC 102.0	

Syllabus 5.B.02 **Performance** TROUBLESHOOT DC distribution system discrepancies to the LRU/wire level **Performance** Given a DC distribution system discrepancy and General Troubleshooting Guidelines, **PERFORM** a visual inspection IAW **Objective 1** the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a DC distribution system discrepancy and necessary equipment, **PERFORM** an operational check of the applicable **Objective 2** system IAW one or more of the following references: **HH-65A** 1H-65A-2-1, Chapter 24 MPC Index, Chapter 24 **HH-60J** A1H60HA-420-100 MPC Index, Chapter 24 HC-130H 1C-130H-2-24GS-00-1 MPC Index, Chapter 24 **HU-25A** 1U-25A-2, Chapter 24

MPC 102.0

Given a DC distribution system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 24
- 1H-65A-2-2, Chapter 24
- 1H-65A-4, Chapter 24

HH-60J

- A1-H60HA-420-100
- A1-H60HA-420-200
- A1-H60HA-420-400

HC-130H

- 1C-130H-4
- 1C-130H-2-24FI-00-2
- 1C-130H-2-24JG-30-1
- 1C-130H-2-24GS-00-1

HU25A

- 1U-25A-2, Chapter 24
- 1U-25A-4, Chapter 24

Given a DC distribution system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- H-65A-2-1, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-420-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-24FI-00-2
- 1C-130H-2-24JG-30-1
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 24
- MPC Index, Chapter 24
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a DC distribution system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

H	H-65A	
•	1H-65A-2-1, Chapter 24	
•	MPC Index, Chapter 24	
H	Н-60Ј	
•	A1-H60HA-420-100	
•	MPC Index, Chapter 24	
H	С-130Н	
•	1C-130H-2-24GS-00-1	
•	MPC Index, Chapter 24	
HU-25A		
•	1U-25A-2, Chapter 24	
•	MPC 102.0	

5.B.03 **Syllabus Performance** TROUBLESHOOT aircraft lighting system discrepancies to the LRU/wire level. **Performance** Given an aircraft lighting system discrepancy and General **Objective 1** Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an aircraft lighting system discrepancy and necessary **Objective 2** equipment, **PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-1, Chapter 33 MPC Index, Chapter 33 **HH-60J** A1-H60HA-420-100 MPC Index, Chapter 33 HC-130H 1C-130H-2-33GS-00-1 MPC Index, Chapter 33 **HU-25A**

Continued next page

1U-25A-2, Chapter 33

MPC 459.0

Given an aircraft lighting system discrepancy, necessary equipment and the results of the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 33
- 1H-65A-2-2, Chapter 33
- 1H-65A-4, Chapter 33

HH-60J

- A1-H60HA-420-100
- A1-H60HA-420-200
- A1-H60HA-420-400

HC-130H

- 1C-130-4
- 1C-130H-2-33FI-00-1
- 1C-130H-2-33FI-00-2
- 1C-130H-2-33GS-00-1
- 1C-130H-2-33JG-00-1

HU-25A

- 1U-25A-2, Chapter 33
- 1U-25A-4, Chapter 33

Given an aircraft lighting system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-1, Chapter 33
- MPC Index, Chapter 33
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-420-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 33
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-33GS-00-1
- 1C-130H-2-33JG-00-1
- MPC Index, Chapter 33
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 33
- MPC 459.0
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an aircraft lighting system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-1, Chapter 33 MPC Index, Chapter 33 HH-60J A1H60HA-420-100 MPC Index, Chapter 33 HC-130H 1C-130H-2-33GS-00-1 MPC Index, Chapter 33 HU-25A 1U-25A-2, Chapter 33 MPC 459.0

Syllabus 5.B.04.1 **Performance** TROUBLESHOOT internal communication system (ICS) discrepancies to the LRU/wire level. **Performance** Given an ICS discrepancy and General Troubleshooting Guidelines, **Objective 1 PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an ICS discrepancy and necessary equipment, PERFORM an **Objective 2** operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 23 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23GS-00-1 **HU-25A**

1U-25A-2-8, Section 3

Given an ICS discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-2, Chapter
- 1H-65A-2-3, Chapter 23
- 1H-65A-4, Chapter 23
- MPC Index, Chapter 23

HH-60J

- A1-H60CA-690-100
- A1-H60CA-690-200
- A1-H60CA-690-400
- A1-H60JA-WDM-000

HC-130H

- 1C-130H-2-8
- 1C-130H-2-13
- 1C-130H-2-23GS-00-1
- 1C-130H-4
- MPC Index, Chapter 23

HU-25A

- 1U-25A-2-8, Section 3
- 1U-25A-2-9, Chapter 23
- 1U-25A-4, Chapter 23
- MPC Index, Chapter 23

Given an ICS discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 3
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an ICS and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A		
•	1H-65A-2-3, Chapter 23	
H	Н-60Ј	
•	A1-H60CA-690-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-23GS-00-1	
HU-25A		
•	1U-25A-2-8, Section 3	

Syllabus 5.B.04.2 **Performance** TROUBLESHOOT VHF-AM communication system discrepancies to the LRU/wire level. **Performance** Given a VHF-AM system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a VHF-AM system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 23 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23GS-00-1 **HU-25A**

1U-25A-2-8, Section 3

Given a VHF-AM system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 23 1H-65A-2-3, Chapter 23 1H-65A-4, Chapter 23 MPC Index, Chapter 23 **HH-60J** A1-H60CA-690-200 A1-H60CA-690-400 A1-H60JA-WDM-000 HC-130H C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-23GS-00-1 MPC Index, Chapter 23 **HU-25A** 1U-25A-2-8, Section 3 1U-25A-2-9, Chapter 23 1U-25A-4, Chapter 23 MPC Index, Chapter 23

Given a VHF-AM system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 3
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a VHF-AM system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

H	H-65A	
•	1H-65A-2-3, Chapter 23	
H	H-60J	
•	A1-H60CA-690-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-23GS-00-1	
HU-25A		<i>I</i>
•	1U-25A-2-8, Section 3	

Syllabus 5.B.04.3 **Performance** TROUBLESHOOT VHF-FM communication system discrepancies to the LRU/wire level. **Performance** Given a VHF-FM system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a VHF-FM system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 23 MPC Index, Chapter 23 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23GS-00-1

Continued next page

HU-25A

1U-25A-2-8, Section 3

Given a VHF-FM system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-2, Chapter 23
- 1H-65A-2-3, Chapter 23
- 1H-65A-4, Chapter 23
- MPC Index, Chapter 23

HH-60J

- A1-H60CA-690-200
- A1-H60CA-690-400
- A1-H60JA-WDM-000

HC-130H

- 1C-130H-2-8
- 1C-130H-4
- 1C-130H-2-13
- 1C-130H-2-23GS-00-1
- MPC Index, Chapter 23

HU-25A

- 1U-25A-2-8, Section 3
- 1U-25A-2-9, Chapter 23
- 1U-25A-4, Chapter 23
- MPC Index, Chapter 23

Given a VHF-FM system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 3
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a VHF-FM system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 23 MPC Index, Chapter 23 HH-60J A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23GS-00-1 HU-25A 1U-25A-2-8, Section 3

Syllabus 5.B.04.4 **Performance** TROUBLESHOOT UHF communication system discrepancies to the LRU/wire level. **Performance** Given a UHF system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a UHF system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 23 MPC Index, Chapter 23 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23JG-20-1 **HU-25A**

1U-25A-2-8, Section 3

Given a UHF system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 23 1H-65A-2-3, Chapter 23 1H-65A-4, Chapter 23 MPC Index, Chapter 23 **HH-60J** A1-H60CA-690-200 A1-H60CA-690-400 A1-H60JA-WDM-000 HC-130H C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-23GS-00-1 MPC Index, Chapter 23 **HU-25A** 1U-25A-2-8, Section 3 1U-25A-2-9, Chapter 23 1U-25A-4, Chapter 23 MPC Index, Chapter 23

Given a UHF system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-23JG-20-1
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 3
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a UHF system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A
1H-65A-2-3, Chapter 23
MPC Index, Chapter 23
HH-60J
A1-H60CA-690-200
HC-130H
1C-130H-2-8
1C-130H-2-23JG-20-1
HU-25A
1U-25A-2-8, Section 3

Syllabus 5.B.04.5 **Performance** TROUBLESHOOT HF communication system discrepancies to the LRU/wire level. **Performance** Given a HF system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a HF system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 23 MPC Index, Chapter 23 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-23JG-10-1 **HU-25A**

1U-25A-2-8, Section 3

Given a HF system discrepancy and necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 23 1H-65A-2-3, Chapter 23 1H-65A-4, Chapter 23 MPC Index, Chapter 23 HH-60J A1-H60CA-690-200 A1-H60CA-690-400 A1-H60JA-WDM-000

- 1C-130H-2-8
- 1C-130H-4

HC-130H

- 1C-130H-2-13
- 1C-130H-2-23GS-00-1
- MPC Index, Chapter 23

HU-25A

- 1U-25A-2-8, Section 3
- 1U-25A-2-9, Chapter 23
- 1U-25A-4, Chapter 23
- MPC Index, Chapter 23

Given a HF system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-23JG-10-1
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 3
- MPC Index, Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a HF system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

H	H-65A	
•	1H-65A-2-3, Chapter 23	
•	MPC Index, Chapter 23	
H	Н-60Ј	
•	A1-H60CA-690-200	
НС-130Н		
•	1C-130H-2-8	
•	1C-130H-2-23JG-10-1	
HU-25A		
•	1U-25A-2-8, Section 3	

Syllabus

5.B.05

Performance

TROUBLESHOOT Secure Communications system discrepancies to the LRU/wire level.

Performance Objective 1

Given a Secure Communications system discrepancy and General Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG).

Performance Objective 2

Given a Secure Communications system discrepancy and necessary equipment, **PERFORM** an operational check of the applicable system IAW one of the following references:

- 1H-65A-2-3, Chapter 23
- MPC Index Chapter 23

HH-60J

- A1H60CA-690-100
- MPC 23102.5
- MPC Index Chapter 23

HC-130H

- 1C-130H-2-8
- 1C-130H-2-23JG-20-2
- 1C-130H-2-23FI-20-3
- MPC Index Chapter 23

HU-25A

- 1U-25A-2, Chapter 23
- 1U-25A-2-8, Section 3
- MPC Index Chapter 23

Given a Secure Communications system discrepancy, necessary equipment and the results of the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 23 1H-65A-2-2, Chapter 23 1H-65A-4, Chapter 23 **HH-60J** A1-H60CA-690-100 A1-H60CA-690-200 A1-H60CA-690-400 HC-130H 1C-130H-2-23FI-20-3 1C-130H-2-23JG-20-2 **HU-25A** 1U-25A-2, Chapter 23 1U-25A-2-8, Section 3 1U-25A-2-9, Chapter 23 1U-25A-4, Chapter 23

Given a Secure Communications system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index Chapter 23

HC-130H

- 1C-130H-2-23FI-20-3
- 1C-130H-2-23JG-20-2
- MPC Index Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 23
- 1U-25A-2-8, Section 3
- MPC Index Chapter 23
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Secure Communications system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 23
- MPC Index Chapter 23

HH-60J

- A1-H60CA-690-100
- MPC 23102.5
- MPC Index Chapter 23

HC-130H

- 1C-130H-2-23JG-20-2
- 1C-130H-2-23FI-20-3
- 1C-130H-2-8
- MPC Index Chapter 23

HU-25A

- 1U-25A-2, Chapter 23
- 1U-25A-2-8, Section 3
- MPC Index Chapter 23

Syllabus	5.B.06	<u>.1</u>
Performance	TROUBLESHOOT VOR/ILS navigation system discrepancies to the LRU/wire level.	
Performance Objective 1	Given a VOR/ILS system discrepancy and General Troubleshooting Guidelines, PERFORM a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG).	
		P
Performance Objective 2	Given a VOR/ILS system discrepancy and necessary equipment, PERFORM an operational check of the applicable system IAW one or more of the following references:	:
	НН-65А	
	• 1H-65A-2-3, Chapter 34	
	• MPC Index, Chapter 34	
	НН-60Ј	
	• A1-H60CA-710-200	
	НС-130Н	
	• 1C-130H-2-8	
	• 1C-130H-2-34JG-50-1	
	HU-25A	

• 1U-25A-2-8, Section 4

Given a VOR/ILS system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34

- 1H-65A-4, Chapter 34
- MPC Index, Chapter 34

HH-60J

- A1-H60CA-710-200
- A1-H60CA-710-400
- A1-H60JA-WDM-000

HC-130H

- 1C-130H-2-8
- 1C-130H-4
- 1C-130H-2-13
- 1C-130H-2-34JG-50-1
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2-8, Section 4
- 1U-25A-2-9, Chapter 34
- 1U-25A-4, Chapter 34
- MPC Index, Chapter 34

Given a VOR/ILS system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a VOR/ILS system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HI	H-65A	
•	1H-65A-2-3, Chapter 34	
•	MPC Index, Chapter 34	
HI	Н-60Ј	
•	A1-H60CA-710-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-34JG-50-1	
H	U-25A	
•	1U-25A-2-8, Section 4	

Performance	TROUBLESHOOT TACAN system discrepancies to the LRU/wire level.	
Performance Objective 1	Given a TACAN system discrepancy and General Troubleshooting Guidelines, PERFORM a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG).	
Performance Objective 2	Given a TACAN system discrepancy and necessary equipment, PERFORM an operational check of the applicable system IAW one or more of the following references:	
	НН-65А	P
	• 1H-65A-2-3, Chapter 34	
	• MPC Index, Chapter 34	
	НН-60Ј	P
	• A1-H60CA-710-200	
	НС-130Н	P
	• 1C-130H-2-8	
	• 1C-130H-2-34JG-50-1	
	HU-25A	Ñ
	• 1U-25A-2-8, Section 4	

Continued next page

5.B.06.2

Syllabus

Given a TACAN system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-2, Chapter 34
- 1H-65A-2-3, Chapter 34
- 1H-65A-4, Chapter 34
- MPC Index, Chapter 34

HH-60J

- A1-H60CA-710-200
- A1-H60CA-710-400
- A1-H60JA-WDM-000

HC-130H

- A1-H60CA-710-200
- A1-H60CA-710-400
- A1-H60JA-WDM-000

HU-25A

- 1U-25A-2-8, Section 4
- 1U-25A-2-9, Chapter 34
- 1U-25A-4, Chapter 34
- MPC Index, Chapter 34

Given a TACAN system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a TACAN system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 HH-60J A1-H60CA-710-200 HC-130H 1C-130H-2-8 1C-130H-2-34JG-50-1 HU-25A 1U-25A-2-8, Section 4

Performance TROUBLESHOOT Identify Friend or Foe (IFF) system discrepancies to the LRU/wire level. **Performance** Given an IFF system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an IFF system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-690-200 HC-130H 1C-130H-2-8 1C-130H-2-34JG-50-1 **HU-25A** 1U-25A-2-8, Section 4

Continued next page

5.B.06.3

Syllabus

Given an IFF system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34 1H-65A-4, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-690-200 A1-H60CA-690-400 A1-H60JA-WDM-000 HC-130H 1C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-34JG-50-1 MPC Index, Chapter 34 **HU-25A** 1U-25A-2-8, Section 4 1U-25A-2-9, Chapter 34 1U-25A-4, Chapter 34 MPC Index, Chapter 34

Given an IFF system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-690-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an IFF system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A
1H-65A-2-3, Chapter 34
MPC Index, Chapter 34
HH-60J
A1-H60CA-690-200
HC-130H
1C-130H-2-8
1C-130H-2-34JG-50-1
HU-25A
1U-25A-2-8, Section 4

Syllabus Performance TROUBLESHOOT Direction Finder (DF) system discrepancies to the LRU/wire level. **Performance** Given a DF system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a DF system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 HC-130H 1C-130H-2-8 1C-130H-2-34JG-50-2 **HU-25A**

1U-25A-2-8, Section 4

Continued next page

5.B.06.4

Given a DF system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34 1H-65A-4, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 A1-H60CA-710-400 A1-H60JA-WDM-000 HC-130H 1C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-34JG-50-2 MPC Index, Chapter 34 **HU-25A** 1U-25A-2-8, Section 4 1U-25A-2-9, Chapter 34 1U-25A-4, Chapter 34 MPC Index, Chapter 34

Given a DF system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-2
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a DF system discrepancy and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

101	nowing references.	
НН-65А		
•	1H-65A-2-3, Chapter 34	
•	MPC Index, Chapter 34	
H	Н-60Ј	
•	A1-H60CA-710-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-34JG-50-2	
Ηl	U-25A	
•	1U-25A-2-8. Section 4	

Syllabus 5.B.06.5 **Performance** TROUBLESHOOT Automatic Direction Finder (ADF) system discrepancies to the LRU/wire level. **Performance** Given an ADF system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an ADF system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 HC-130H 1C-130H-2-8 1C-130H-2-34JG-50-1 **HU-25A**

1U-25A-2-8, Section 4

Given an ADF system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34 1H-65A-4, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 A1-H60CA-710-400 A1-H60JA-WDM-000 HC-130H 1C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-34JG-50-1 MPC Index, Chapter 34 **HU-25A** 1U-25A-2-8, Section 4 1U-25A-2-9, Chapter 34 1U-25A-4, Chapter 34 MPC Index, Chapter 34

Given an ADF system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an ADF system discrepancy and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HI	H-65A	
•	1H-65A-2-3, Chapter 34	
•	MPC Index, Chapter 34	
HI	H-60J	
•	A1-H60CA-710-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-34JG-50-1	
Н	J-25A	
•	1U-25A-2-8. Section 4	

Syllabus 5.B.06.6 **Performance** TROUBLESHOOT Global Positioning System (GPS) discrepancies to the LRU/wire level. **Performance** Given a GPS discrepancy and General Troubleshooting Guidelines, **Objective 1 PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a GPS system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 HC-130H 1C-130H-2-8 1C-130H-2-34JG-50-2

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HU-25A

1U-25A-2-8, Section 4

Given a GPS system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34 1H-65A-4, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60CA-710-200 A1-H60CA-710-400 A1-H60JA-WDM-000 HC-130H 1C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-34JG-50-2 MPC Index, Chapter 34 **HU-25A** 1U-25A-2-8, Section 4 1U-25A-2-9, Chapter 34 1U-25A-4, Chapter 34 MPC Index, Chapter 34

Given a GPS system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-50-2
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a GPS system discrepancy and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

	_	
HI	H-65A	
•	1H-65A-2-3, Chapter 34	
•	MPC Index, Chapter 34	
HI	Н-60Ј	
•	A1-H60CA-710-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-34JG-50-2	
Н	U-25A	
•	1U-25A-2-8 Section 4	

Performance	TROUBLESHOOT Compass system discrepancies to the LRU/wire level.	
Performance Objective 1	Given a Compass system discrepancy and Troubleshooti Guidelines, PERFORM a visual inspection IAW the Ge Troubleshooting Guidelines (section 5.B.GTG).	
Performance Objective 2	Given a Compass system discrepancy and necessary equal PERFORM an operational check of the applicable syste or more of the following references:	*
	HH-65A	
	• 1H-65A-2-3, Chapter 34	
	• MPC Index, Chapter 34	
	НН-60Ј	
	• A1-H60HA-560-200	
	НС-130Н	
	• 1C-130H-2-8	
	• 1C-130H-2-34JG-20-3	
	HU-25A	
	• 1U-25A-2-8, Section 10	
	Con	ntinued next page

Syllabus

5.B.06.7

Given a Compass system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-2, Chapter 34 1H-65A-2-3, Chapter 34 1H-65A-4, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1-H60HA-560-200 A1-H60HA-560-400 A1-H60JA-WDM-000 HC-130H 1C-130H-2-8 1C-130H-4 1C-130H-2-13 1C-130H-2-34JG-20-3 MPC Index, Chapter 34 **HU-25A** 1U-25A-2-8, Section 10 1U-25A-2-9, Chapter 34 1U-25A-4, Chapter 34 MPC Index, Chapter 34

Given a Compass system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-560-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34JG-20-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25-2-8, Section 10
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Compass system discrepancy and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

H	H-65A	
•	1H-65A-2-3, Chapter 34	
•	MPC Index, Chapter 34	
H	Н-60Ј	
•	A1-H60HA-560-200	
H	С-130Н	
•	1C-130H-2-8	
•	1C-130H-2-34JG-20-3	
H	U-25A	
•	1U-25A-2-8, Section 10	

Syllabus 5.B.07 **Performance** TROUBLESHOOT Radar system discrepancies to the LRU/wire level. **Performance** Given a Radar system discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a Radar system discrepancy and necessary equipment, **Objective 2 PERFORM** an operational check of the applicable system IAW one of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1H60HA-710-100 MPC Index, Chapter 34 HC-130H 1C-130H-2-8 1C-130H-2-34GS-00-1 MPC Index, Chapter 34

• 1U-25A-2, Chapter 34

HU-25A

- 1U-25A-2-8, Section 7
- MPC Index, Chapter 34

Given a Radar system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- 1H-65A-2-2, Chapter 34
- 1H-65A-4, Chapter 34

HH-60J

- A1-H60HA-710-100
- A1-H60HA-710-200
- A1-H60HA-710-400

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34GS-00-1

HU-25A

- 1U-25A-2, Chapter 34
- 1U-25A-2-8, Section 7
- 1U-25A-2-9, Chapter 34
- 1U-25A-4, Chapter 34

Given a Radar system discrepancy and necessary equipment, CORRECT the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-8
- 1C-130H-2-34GS-00-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 34
- 1U-25A-2-8, Section 7
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Radar system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A
1H-65A-2-3, Chapter 34
MPC Index, Chapter 34
HH-60J
A1-H60HA-710-100
MPC Index, Chapter 34
HC-130H
1C-130H-2-8
1C-130H-2-34GS-00-1
MPC Index, Chapter 34
HU-25A
1U-25A-2, Chapter 34
1U-25A-2-8, Section 7
MPC Index, Chapter 34

Syllabus 5.B.08

Performance TROUBLESHOOT Radio/Radar Altimeter system discrepancies to

Performance Objective 1

Given a Radio/Radar Altimeter system discrepancy and General Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG).

_____*D*

Performance Objective 2

Given a Radio/Radar Altimeter system discrepancy and necessary equipment, **PERFORM** an operational check of the applicable system IAW one of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34

the LRU/wire level.

HH-60J

- A1H60CA-710-100
- MPC Index, Chapter 34

НС-130Н

- 1C-130H-2-8
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2, Chapter 34
- 1U-25A-2-8, Section 4
- MPC Index, Chapter 34

Given a Radio/Radar Altimeter system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A
1H-65A-2-3, Chapter 34
1H-65A-2-2, Chapter 34
1H-65A-4, Chapter 34
HH-60J
A1-H60CA-710-100
A1-H60CA-710-200
A1-H60CA-710-400
HC-130H
1C-130H-2-8
HU-25A
1U-25A-2, Chapter 34
1U-25A-2-9, Chapter 34
1U-25A-4, Chapter 34
1U-25A-4, Chapter 34

Given a Radio/Radar Altimeter system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 34
- 1U-25A-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Radio/Radar Altimeter system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34

HH-60J

- A1-H60CA-710-100
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2, Chapter 34
- 1U-25A-2-8, Section 4
- MPC Index, Chapter 34

Syllabus 5.B.08 **Performance**

Performance Objective 1

Given a Radio/Radar Altimeter system discrepancy and General Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG).

TROUBLESHOOT Radio/Radar Altimeter system discrepancies to

Performance Objective 2

Given a Radio/Radar Altimeter system discrepancy and necessary equipment, **PERFORM** an operational check of the applicable system IAW one of the following references:

HH-65A

1H-65A-2-3, Chapter 34

the LRU/wire level.

MPC Index, Chapter 34

HH-60J

- A1H60CA-710-100
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2, Chapter 34
- 1U-25A-2-8, Section 4
- MPC Index, Chapter 34

Given a Radio/Radar Altimeter system discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A
1H-65A-2-3, Chapter 34
1H-65A-2-2, Chapter 34
1H-65A-4, Chapter 34
HH-60J
A1-H60CA-710-100
A1-H60CA-710-200
A1-H60CA-710-400
HC-130H
1C-130H-2-8
HU-25A
1U-25A-2, Chapter 34
1U-25A-2-9, Chapter 34
1U-25A-2-9, Chapter 34
1U-25A-4, Chapter 34

Given a Radio/Radar Altimeter system discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60CA-710-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-8
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 34
- 1U-25A-2-8, Section 4
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Radio/Radar Altimeter system and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 HH-60J A1-H60CA-710-100 MPC Index, Chapter 34 HC-130H 1C-130H-2-8 MPC Index, Chapter 34 HU-25A 1U-25A-2, Chapter 34 1U-25A-2-8, Section 4

MPC Index, Chapter 34

Syllabus 5.B.09 **Performance** TROUBLESHOOT Traffic Alert and Collision Avoidance System (TCAS) discrepancies to the LRU/wire level. Given a TCAS discrepancy and General Troubleshooting Guidelines, **Performance PERFORM** a visual inspection IAW the General Troubleshooting **Objective 1** Guidelines (section 5.B.GTG). **Performance** Given a TCAS discrepancy and necessary equipment, **PERFORM Objective 2** an operational check of the applicable system IAW one or more of the following references: **HH-65A** TCAS 1 IMM **MPC HH-60J** TCAS 1 IMM **MPC** HC-130H 1C-130H-2-34JG-40-6 1C-130H-2-34FI-40-7 **MPC**

HU-25A

• 1U-25A-2-8, Section 4

• MPC

Given a TCAS discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A		
•	TCAS 1 IMM	
•	MPC	
H	Н-60Ј	<i>Ø</i>
•	TCAS 1 IMM	
•	MPC	
H	С-130Н	
•	1C-130H-2-34JG-40-6	
•	1C-130H-2-34FI-40-7	
•	MPC	
H	U-25A	
•	1U-25A-2-8, Section 4	
•	MPC	

Given a TCAS discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A
TCAS 1 IMM
MPC
HH-60J
TCAS 1 IMM
MPC
HC-130H
1C-130H-2-34JG-40-6
1C-130H-2-34FI-40-7
MPC
HU-25A
1U-25A-2-8, Section 4
MPC

Given a TCAS and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A		
•	TCAS 1 IMM	
•	MPC	
HI	H-60J	
•	TCAS 1 IMM	
•	MPC	
H	С-130Н	
•	1C-130H-2-34JG-40-6	
•	1C-130H-2-34FI-40-7	
•	MPC	
H	U-25A	
•	1U-25A-2-8, Section 4	
•	MPC	

Syllabus 5.B.10 **Performance** TROUBLESHOOT Air Data System discrepancies to the LRU/wire level. **Performance** Given an Air Data System discrepancy and General Troubleshooting **Objective 1** Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an Air Data System discrepancy and necessary equipment, **Objective 2** PERFORM an operational check of the applicable system IAW one or more of the following references: **HH-65A** 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1H60HA-510-100 A1H60HA-560-100 MPC Index, Chapter 34 HC-130H 1C-130H-2-34FI-10-1 1C-130H-2-34JG-10-1 MPC Index, Chapter 34 **HU-25A** 1U-25A-2, Chapter 34

Continued next page

1U-25A-2-8, Section 9

MPC Index, Chapter 34

Given an Air Data System discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 34 1H-65A-2-2, Chapter 34 1H-65A-4, Chapter 34 **HH-60J** A1-H60HA-510-100 A1-H60HA-510-200 A1-H60HA-510-400 A1-H60HA-560-100 A1-H60HA-560-200 A1-H60HA-560-400 HC-130H 1C-130H-2-34FI-10-1 1C-130H-2-34JG-10-1 **HU-25A** 1U-25A-2, Chapter 34 1U-25A-2-8, Section 9 1U-25A-4, Chapter 34

Given an Air Data System discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-510-300
- A1-H60HA-560-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 34

HC-130H

- 1C-130H-2-34FI-10-1
- 1C-130H-2-34JG-10-1
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2, Chapter 34
- 1U-25A-2-8, Section 9
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an Air Data System and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 HH-60J A1-H60HA-510-100 A1-H60HA-560-100 MPC Index, Chapter 34 HC-130H 1C-130H-2-34FI-10-1 1C-130H-2-34JG-10-1 MPC Index, Chapter 34 HU-25A 1U-25A-2, Chapter 34 1U-25A-2-8, Section 9 MPC Index, Chapter 34

5.B.11 **Syllabus Performance** TROUBLESHOOT Automatic Flight System discrepancies to the LRU/wire level. **Performance** Given an Automatic Flight System discrepancy and General **Objective 1** Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given an Automatic Flight System discrepancy and necessary **Objective 2** equipment, **PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 22 MPC Index, Chapter 22 **HH-60J** A1H60HA-560-100 MPC Index, Chapter 22 HC-130H 1C-130H-2-22GS-00-1 MPC Index, Chapter 22 **HU-25A**

Continued next page

1U-25A-2, Chapter 22

1U-25A-2-8, Section 11

MPC Index, Chapter 22

Given an Automatic Flight System discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 22
- 1H-65A-2-2, Chapter 22
- 1H-65A-4, Chapter 22

HH-60J

- A1-H60HA-560-100
- A1-H60HA-560-200
- A1-H60HA-560-400

HC-130H

- 1C-130H-4
- 1C-130H-2-22GS-00-1
- 1C-130H-2-22FI-10-1-3
- 1C-130H-2-22JG-10-1-2

HU-25A

- 1U-25A-2, Chapter 22
- 1U-25A-2-8, Section 11
- 1U-25A-4, Chapter 22

Given an Auto Flight System discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 22
- MPC Index, Chapter 22
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-560-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 22

HC-130H

- 1C-130H-2-22GS-00-1
- 1C-130H-2-22FI-10-1-3
- 1C-130H-2-22JG-10-1-2
- MPC Index, Chapter 22
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2, Chapter 22
- 1U-25A-2-8, Section 11
- MPC Index, Chapter 22
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given an Auto Flight System discrepancy and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A 1H-65A-2-3, Chapter 22 MPC Index, Chapter 22 HH-60J A1-H60HA-560-100 MPC Index, Chapter 22 HC-130H 1C-130H-2-22GS-00-1 MPC Index, Chapter 22 HU-25A 1U-25A-2, Chapter 22 1U-25A-2-8, Section 11

MPC Index, Chapter 22

Syllabus 5.B.12 **Performance** TROUBLESHOOT Flight Director System discrepancies to the LRU/wire level. **Performance** Given a Flight Director System discrepancy and General **Objective 1** Troubleshooting Guidelines, **PERFORM** a visual inspection IAW the General Troubleshooting Guidelines (section 5.B.GTG). **Performance** Given a Flight Director System discrepancy and necessary **Objective 2** equipment, **PERFORM** an operational check of the applicable system IAW one or more of the following references: HH-65A 1H-65A-2-3, Chapter 34 MPC Index, Chapter 34 **HH-60J** A1H60HA-560-100 MPC Index, Chapter 34 HC-130H 1C-130H-2-34JG-20-1 1C-130H-2-34FI-20-1 1C-130H-2-34FI-20-2 MPC Index, Chapter 34 **HU-25A**

Continued next page

1U-25A-2, Chapter 22

1U-25A-2-8, Section 8

MPC Index, Chapter 22

Given a Flight Director System discrepancy, necessary equipment and the results from the previous operational check, **ISOLATE** and **LOCATE** the malfunction to the most probable component/wire IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- 1H-65A-2-2, Chapter 34
- 1H-65A-4, Chapter 34

HH-60J

- A1-H60HA-560-100
- A1-H60HA-560-200
- A1-H60HA-560-400

HC-130H

- 1C-130H-2-34JG-20-1
- 1C-130H-2-34FI-20-1
- 1C-130H-2-34FI-20-2
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2, Chapter 22
- 1U-25A-2-8, Section 8
- 1U-25A-2-9, Chapter 22
- 1U-25A-4, Chapter 22

Given a Flight Director System discrepancy and necessary equipment, **CORRECT** the malfunction IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HH-60J

- A1-H60HA-560-300
- A1-H60CA-WCR-000
- MPC Index, Chapter 22

HC-130H

- 1C-130H-2-34JG-20-1
- 1C-130H-2-34FI-20-1
- 1C-130H-2-34FI-20-2
- MPC Index, Chapter 34
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

HU-25A

- 1U-25A-2-2, Chapter 22
- 1U-25A-2-8, Section 8
- MPC Index, Chapter 22
- AFTO 1-1A-14 (NAVAIR 01-1A-505)

Given a Flight Director System and necessary equipment, **PERFORM** a final operational check of the applicable system to verify the discrepancy has been corrected IAW one or more of the following references:

HH-65A

- 1H-65A-2-3, Chapter 34
- MPC Index, Chapter 34

HH-60J

- A1-H60HA-560-100
- MPC Index, Chapter 22

HC-130H

- 1C-130H-2-34JG-20-1
- 1C-130H-2-34FI-20-1
- 1C-130H-2-34FI-20-2
- MPC Index, Chapter 34
- MPC Index, Chapter 34

HU-25A

- 1U-25A-2, Chapter 22
- 1U-25A-2-8, Section 8
- MPC Index, Chapter 22

Objectives

To successfully complete this assignment, you must study the text, complete the self-quiz and master the following objectives:

- **STATE** the definition of a mishap.
- **STATE** the significance of a near mishap.
- **STATE** who is responsible for mishap prevention.
- **STATE** the definition of safety.
- **STATE** the two conditions that must be present to result in an electrical shock.
- **STATE** the current flow which is considered to be lethal.
- **STATE** the meaning of secondary injury in relation to an electrical shock.
- **STATE** the five steps for treating a victim of an electrical shock.
- **LIST** the two types of warning signs found in electrical and electronic shops or spaces.
- **STATE** what electrical warning tags are used for.
- **STATE** who should remove electrical warning tags.
- **STATE** the RF radiation hazard associated in personnel biological injury.
- **LIST** the two body organs most sensitive to RF radiation.
- **STATE** the manual that lists the permissible RF exposure limits.
- **STATE** the importance of discharging de-energized electrical or electronic equipment before performing any maintenance on it.
- **STATE** why there is an increased danger when working with voltages over 300 volts.
- **STATE** who is allowed to work on electrical and electronic equipment.
- **STATE** what safety equipment is to be worn while working on energized circuits.

Objectives (Continued)

- **LIST** the safety equipment required to be readily available in electrical and electronic shops.
- **STATE** the voltage rating requirement for the rubber gloves.
- **STATE** who is responsible for ensuring the guidelines are being followed regarding the unit Respiratory Program.
- **STATE** who is responsible for cleaning and storage of personal respirators.
- **STATE** why hearing conservation is important.
- **STATE** the purpose of the Hearing Conservation Program.
- **STATE** the decibel level at which hearing protection is required.
- **LIST** five possible effects of high noise levels on the body.
- **STATE** why CO₂ is the preferred extinguishing agent for an electrical fire.
- **STATE** the warning associated with the discharging a CO₂-type fire extinguisher.
- **STATE** why water-type fire extinguishers should not be used on electrical equipment fires.
- **LIST** the effects of glare.

References

The information in this assignment can be found in the following manuals:

- Electronics Manual, COMDTINST M10550.25
- Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)

Overview 5.D.01c

Introduction

This assignment is an introduction to General AVT Shop Safety. The information contained in this assignment will help you in becoming a more safety conscious technician.

Aspects for this Performance Qualification

There are two aspects concerning this performance qualification.

- First, there is a performance aspect which is "INSTRUCT", that must be demonstrated to your supervisor using the enclosed syllabus.
- Second, there is the "safety procedures" aspect which you will
 use to base your instruction on. The basic knowledge for this
 aspect will be presented in this assignment.

Military Requirements

The knowledge supporting the instruct performance is found in the Military Requirements for E-5/E-6. You should review the applicable sections of the Military Requirements for E-5/E-6 in order to prepare yourself for this performance qualification.

In This Assignment

This assignment contains the following:

Subject	Page
Mishap Prevention	5
General AVT Shop Safety	7
Electrical Shock	9
Electrical Warning Signs and Tags	12
RF Radiation Hazards	14
Discharging De-energized Equipment	17
Checking Voltages Over 300 Volts	20
General AVT Shop Personnel Safety Information	21
Required AVT Shop Safety Equipment	23
Respiratory Protection	26
Hearing Conservation	27
Electrical Fires	29
Cleaning Electrical Equipment	31
Lighting	32
General AVT Shop Safety Self-Quiz	33
General AVT Shop Safety Self-Quiz Feedback	38
Syllabus	41

Introduction

Why is mishap prevention necessary? The Coast Guard's motto is "Semper Paratus" meaning Always Ready. Therefore, the quality of our performance has a direct effect on our readiness.

Mishaps produce waste. By reducing mishaps, waste is also reduced.

Mishap Definition

A mishap is an unplanned event that results in injuries to personnel, occupational illness, loss of life and/or damage to equipment.

Near-mishap Definition

A near-mishap is a mishap that almost happened. It is an occurrence in which the mishap chain was broken.

While a near-mishap does not cause damage to equipment or injury to personnel, it does serve as a notice that a hazardous condition exists that could cause a future mishap.

Near-mishaps are significant because they serve as a warning!

Mishap Attributes

Mishaps do not happen without a cause. Therefore, we must train ourselves to recognize conditions that can cause a mishap. There are certain attributes that contribute to most mishaps. They are as follows:

- Inexperience
- Carelessness
- Overconfidence
- Deviating from prescribed procedures
- Inattention to the job

Responsibilities

Mishap prevention is the responsibility of the entire chain of command.

Commanding Officer

The Commanding Officer is responsible for the overall safety of the command.

Supervisors

Supervisors are responsible for ensuring that all safety precautions are strictly adhered to.

Individuals

Individuals are responsible for developing safe work habits and observing all safety precautions.

General Mishap Prevention Guidelines

Since people cause mishaps, mishap prevention must be directed at people. Some general guidelines for mishap prevention are listed below:

- Report any condition, equipment, or procedure that you consider to be unsafe
- Warn personnel of known hazards
- Wear or use the required, approved protective clothing or equipment
- If someone is not wearing or using the required safety equipment, point it out to them or take the initiative to provide them with the required equipment
- Report any injury or evidence of impaired health, related to the job
- Take the appropriate action if an unforeseen mishap occurs

If you are not sure, ask your supervisor!

Introduction

Being safe should NOT be considered an option you can choose. You should have safety in mind at all times whether you are working in the shop, on an aircraft or just going about your daily routine. It is impossible to cover every safety situation that you may encounter on the job, therefore only general shop safety information will be covered in this assignment.

Definition of Safety

Safety is the condition of being safe from undergoing or causing damage, injury or loss.

General Electrical and Electronic Safety Rational

"All electrical or electronic equipment should be considered dangerous with the potential to kill." This is a general statement that you have heard from the beginning of your career and it is VERY important since most fatal electrical shocks are delivered to people who should have known better.

Most of us remember the most important safety precautions. However, how many of us think of the small details that ENSURE safety? How many of us realize that it's the current, not the voltage that is lethal.

Ignoring Cautions and Warnings

As you become more familiar with the systems and equipment you are responsible for, you may become complacent, forgetting the safety precautions you learned in "A" school and ignoring the cautions and warnings listed in the maintenance publications.

Common Excuses

Listed below are some of the most common reasons or excuses that are used to justify not following safety precautions; see how many you have heard or maybe even used:

- "Nothing has ever happened to me."
- "I know how to get around that."
- "I don't have time for all of that."
- "I do it ALL the time."
- "That's stupid."
- "I'm not that stupid."

And the list goes on....

When Should You Follow Safety Practices?

Now is a good point in your career to review for yourself and, as a petty officer, to impress upon others the importance of following the appropriate safety practices.

Electrical Shock 5.D.01c

Electrical Shock Description

An electrical shock occurs when a person comes into contact with an energized electrical wire or circuit resulting in a flow of electrical current through the body. The severity of the shock is based on many factors which add to or subtract from it's intensity.

Conditions For an Electrical Shock to Occur

There are two conditions that must be present in order for current to flow through an individual's body resulting in an electrical shock. They are as follows:

- First, some part of the body must form part of a closed circuit.
- Second, there must be a difference in potential to cause current to flow through the circuit.

Current flow depends on the electrical resistance of the circuit path through the victim's body. Human skin resistance can range from a few hundred ohms when wet, to well over 500,000 ohms when dry.

Effects of Electrical Shock and Current Relationship

In order for your body to register an electrical shock, there must be some current flow. The table below shows the general effects of current flow through the human body:

Current in milliamperes	Effects on the body
0	None
3	Mild tingling
10	Painful
25	Very painful (can't let go)
60	Severe (breathing difficulty)
140	Usually fatal (heart twitches)
200	Burning odor (heart clamps)

Signs and Symptoms of a Serious Electrical Shock

The victim of a serious electrical shock may have any or all of the following signs or symptoms:

- Burns where the current flow entered and/or exited the body
- Nerve damage (paralysis)
- Muscle tenderness and or twitching
- Breathing difficulty (the tongue may swell and obstruct the airway)
- Irregular heartbeat or cardiac arrest
- Blood pressure may be elevated or lowered
- Restlessness/irritability or loss of consciousness
- Visual difficulties
- Seizures
- Secondary injuries (cuts, bruises, broken bones, etc.)

Secondary Injuries

Often, secondary injuries are sustained from an electrical shock as a result of surprise, and are sometimes in themselves fatal (such as falling from a work-stand).

Guidelines for Rescuing Electrical Shock Victims

Follow these guidelines when rescuing a person who is in contact with a live wire or circuit:

- Turn off the power supplying the circuit.
- If this cannot be done, a suitable non-conducting material (such as a wooden cane) may be used to remove the source of the electrical hazard from the victim or to remove the victim from the source.

Examples of Suitable Non-Conducting Materials

Listed below are examples of non-conducting materials that may used to free someone from a live wire or circuit:

WARNING

Do NOT use the shorting probe as a means of freeing someone who is in contact with a live wire or circuit.

- Belts
- Dry clothing
- Dry rope
- Wooden cane

Remaining calm and using good common sense is most important when rescuing someone in contact with a live wire or circuit.

Steps for Treating a Serious Electrical Shock

Listed below are steps you should follow when treating the victim of a serious electrical shock, supporting standard CPR and first aid practices:

Step	Action	
1	Ensure the source of electrical power has been secured or removed	
2	Provide airway care (remember the tongue may be swollen)	
3	Provide CPR as required	
4	Treat burns and other secondary injuries	
5	Seek medical attention	

Post Electrical Shock

If you are the victim of a painful electrical shock, you should report to medical for a cardiac evaluation.

Intentional Electrical Shock

Intentionally taking an electrical shock at any voltage is dangerous and STRICTLY FORBIDDEN.

Introduction

A major area of concern when working in electrical or electronic shops is being aware of your surroundings. Warning signs and Electrical Warning tags are used to warn personnel of electrical hazards.

Types of Warning Signs

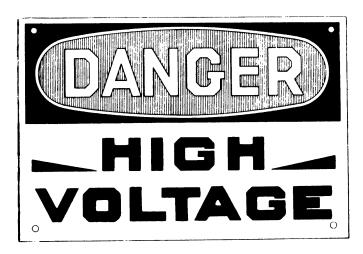
"High Voltage" and "RF Radiation Hazard" are the types of electrical hazard warning signs used in electrical and electronic shops.

"High Voltage" Warning Sign

This sign is displayed to identify a shock hazard area. The danger may exist in the form of direct contact and/or high voltage arc-over.

"High Voltage" Warning Sign Illustration

The illustration below is an example of the "High Voltage" warning signs found in areas with this type of hazard:



"High Voltage" Warning Sign Display Requirements "High Voltage" warning signs are required to be displayed in a conspicuous location near each entrance to electrical and electronic spaces containing permanently installed and/or portable electrical equipment with a shock hazard of 70 volts or more.

NOTE

Excluded from this requirement are spaces which have only lighting, convenience, and ventilation circuits.

Electrical Warning Tags Description

Electrical warning tags are used when repairing or servicing electrical and electronic equipment. These tags are red with black lettering and are used by technicians to identify a circuit or component that has been intentionally secured.

Electrical Warning Tag Illustration

The illustration below shows an example of a electrical warning tag:



Tag Installation

This warning tag must be filled out and attached or installed on the applicable switch, circuit breaker, or controller ONLY by the technician doing the work. This includes battery back-up systems.

Multiple Technicians

In the case where there are more than one person working, a tag for EACH person is placed on the switch, circuit breaker, or controller.

Tag Removal

The warning tag MUST NOT be removed by any person other than the technician who's name appears on it.

When more than one person is working, they will only remove their OWN tag.

Electromagnetic Radiation (RF) from radar, and communication transmitters are hazardous and cause undesirable effects under certain conditions.

Categories of Radiation Hazards

Generally, these radiation hazards fall into one of the following categories:

- Induced Voltage Effects
- Personnel Biological Injury

Facts About Induced Voltage Effects

Listed below are facts pertaining to induced voltage effects:

- RF induced voltages set up in a structure or other metal objects will cause an electrical shock or produce open sparks when contact is made or broken by personnel or other conductive media.
- RF will induce a voltage in small metal objects or tools which, when discharged, may draw an electrical arc sufficient to ignite fuel vapors or combustible material.
- Also, the induced voltage and current may be of a magnitude large enough to actuate electrically operated devices and may even heat a metallic object sufficiently to ignite flammable material.

Personnel Biological Injury

When electromagnetic energy is absorbed by human tissues, heat is produced. The body cannot dissipate this heat as fast as it is produced, therefore the internal temperature of the body will increase causing damage to tissue and internal organs.

Body Organs Most Sensitive to RF Radiation

WARNING

Exposure to all electromagnetic radiation shall be avoided wherever possible.

The body organs most sensitive to RF radiation are the:

- Eyes
- Testicles

Facts About RF Radiation Depth of Penetration

Listed below are facts pertaining to RF depth of penetration:

- The equipment operating frequency determines the depth which RF radiation penetrates the body tissues. VHF and UHF frequencies between 200 and 3,000 MHz penetrate deeply into the body.
- HF frequencies between 3,000 and 11,000 MHz produce heating near or at the surface of the body. Since the body's surface is supplied with more sensory nerves, the HF frequencies will produce more of a feeling of warmth, therefore giving an earlier physical warning of over-exposure.
- The lower VHF and UHF frequency range penetrates deeper below the nerves and cause a general rise in body temperature. This will normally not be felt in time to provide adequate warning.

Permissible Exposure Limits

Permissible Exposure Limits (PELs) have been developed by the Commandant (G-CSP) and are found in the Electronics Manual, COMDTINST M10550.25.

RF Radiation Exposure Awareness

We should all be aware of RF radiation hazards in the work area and in our surroundings. However, the possibility of exposure to RF radiation may still exist through any of the mishap attributes.

The two most likely attributes are:

- Carelessness
- Deviating from prescribed procedures

Example of RF Exposure Awareness

The following scenario is an RF radiation hazard example that you and others may knowingly or unknowingly be exposed to:

A technician in your shop decides to check out a UHF antenna that is in question. The technician decides to simply connect the antenna to a UHF transceiver that has just undergone minimum performance checks. You are sitting across the bench from this technician who is not following established antenna check-out procedures. The antenna is found to be functioning normal and is returned to service.

A few hours later you report to medical complaining of sore eyes, and you have no explanation of what may have caused this discomfort.

Types of "RF Radiation Hazard" Warning Signs There are four types of RF radiation hazard signs used to warn personnel of this type of danger.

Listed below are the four types of "RF Radiation Hazard" signs and where they are required to be displayed:

- Type A to be located on radar antenna pedestals
- Type B to be located on or adjacent to the radar set controls
- Type C to be located at eye level at the foot of ladders or other accesses to all towers, masts, and rooftops which are subjected to hazardous levels of radiation
- Type D to be located in radio transmitter rooms in suitable locations in full view of all personnel.

Examples of "RF Radiation Hazard" Warning Signs

The following are examples of the four types of "RF Radiation Hazard" signs:



In some cases the electrical charge retained by some de-energized electrical and electronic equipment or components is sufficient to cause a lethal shock.

Consider this hazard before performing any type of maintenance or making any type of connections to a seemingly dead piece of equipment.

High Voltage Capacitors

Some shop equipment or aircraft components brought into the shop may contain one or more high voltage capacitors. To insure your safety; discharge and ground all high voltage capacitors using only an approved "shorting probe".

Shorting Probe Description

A shorting probe is a device used to discharge and ground electrical circuits and components. It consists of a non-conducting handle, a conducting rod (probe), a five foot grounding cable/clip and a neon lamp with a red lens. It is rated at 25 thousand volts and is the only APPROVED shorting probe, (see page 18).

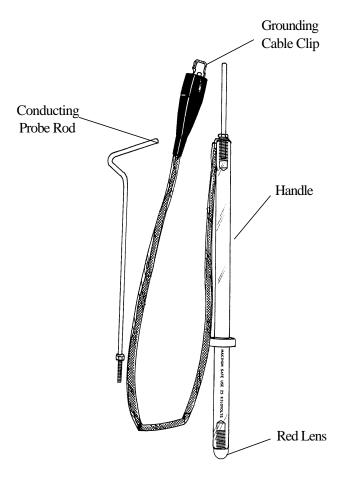
Parts and Functions of the Shorting Probe

The following table describes the parts and functions of the shorting probe:

Parts	Functions
Conducting Probe Rod	Used to contact the desired shorting point or component.
Grounding Cable Clip	To be connected to suitable ground before shorting.
Handle	A non-conducting handle to isolate the technician from the circuit.
Red Lens	Houses a neon bulb used to detect high levels of RF without making actual contact with a circuit.

Shorting Probe Illustration

The illustration below is an example of an approved shorting probe:



Guidelines for Using the Shorting Probe

Listed below are guidelines you should follow when using a shorting probe:

WARNING

Do NOT touch any of the metal parts of the shorting probe while touching the probe to the shorting point.

- Secure and tag the power supply to the circuit or component to be shorted
- Attach the grounding cable clip to a suitable ground (if necessary, scrape away any paint to ensure a good connection)
- Holding the shorting probe by the handle, touch the probe rod end to the point to be shorted. (This should be done several times to ensure that all residual voltage has been discharged)

Examples of Other Uses

The shorting probe may be used for different applications as required. The probe end is fashioned so that it can be hooked over the shorting point or part, to provide a constant connection by the weight of the handle alone (such as for grounding out a circuit).

The red light in the handle of the shorting probe may be used to detect high levels of electromagnetic radiation (RF) such as a transmitting radar or HF antenna. However, bear in mind that using the probe for this purpose will often place you in close proximity to the RF source.

Examples of Non-Uses

Due to the metal parts and dangling grounding clip on the shorting probe, the shorting probe should not be used to free someone who is in contact with a live wire or circuit.

There is an inherent increased danger of electrocution when taking measurements on circuits with potentials over 300 volts. This danger stems from the increased possibility of high voltage arc-over.

Before You Begin

Before checking voltages over 300 volts, always review and follow the prescribed procedures listed in the applicable maintenance publication.

Guidelines for Checking Voltages Over 300 Volts

Listed below are guidelines for checking voltages over 300 volts:

- De-energize and tag the power supply to the equipment
- Discharge capacitors using an approved shorting probe
- Attach ground probe of test equipment first
- Attach measuring probe to test point
- Make sure controls of the measuring device are in the proper configuration for the voltage level and polarity being measured
- Position measuring device so you will be able to read the measurement
- Energize the equipment and observe the measurement
- De-energize the equipment
- Discharge capacitors using an approved shorting probe
- Remove test leads
- Repeat for each measurement to be taken

Basic electrical and electronic safety information will be covered in this section in regards to working in these types of shops.

The information listed below is general in nature and should NOT replace the prescribed information listed in your station instructions.

Trained Personnel

Only trained and competent personnel shall be permitted to work on electrical or electronic equipment.

Personnel working with electrical or electronic equipment shall be fully informed of the inherent hazards. Also, a safety observer qualified in CPR and first aid shall be present at ALL times.

Working on Equipment

Never work on electrical or electronic equipment by yourself. The safety observer must be familiar with emergency power shut-off's, and shall be given instructions to hit the switch immediately if anything unforeseen happens.

Working on Energized Circuits Guidelines

Repair and testing of energized circuits shall be done only when absolutely necessary. Listed below are guidelines you should follow when working on energized circuits:

- Get permission from your supervisor, authorizing this type of work
- All work shall be supervised and performed by qualified technicians
- Wear rubber gloves for potentials over 30 volts and follow all safety procedures
- Personnel doing this type of work shall be fully aware of the dangers involved
- Follow the prescribed procedures listed in the applicable maintenance publications
- Use one hand only whenever possible, keeping the other behind your back or at your side
- Never wedge yourself into a position that you cannot quickly get out of

5.D.01c General AVT Shop Personnel Safety Information (Continued)

Clothing

Do not wear clothing that:

- Is loose
- Is wet
- Has exposed metal zippers, buttons, or fasteners

Shoes

When working in an electrical or electronic shop, wear shoes that are non-conducting and do not have exposed metal parts or fasteners.

Jewelry

Do not wear any of the following metal items when working on electrical or electronic equipment or if working within four feet of exposed energized circuits.

- Rings
- Watches
- Bracelets
- Dogtags
- Metal-framed eyewear

Damp Locations

Do not work on electrical or electronic equipment when either your hands, clothing, or the deck is wet.

Guidelines for Working Around Wire and Antennas

Listed below are general guidelines for working around antennas:

- Never allow bare wires to be located in close proximity to flammable fuels, chemicals, or in the path of personnel.
- Never lean against or grasp an antenna or antenna lightning arrestor while in contact with an electrical ground.

CPR Training Requirement

The Electronics Material Officer (EMO) supervisor shall ensure that ALL personnel engaged in electrical or electronic work be instructed in CPR.

Each person assigned to an electrical or electronic shop is required to demonstrate proficiency in CPR, and periodic drills shall be held to maintain proficiency.

To reduce the risk of electrocution or electric shock in electrical and electronic shops, certain types of safety equipment is required to be readily available.

Every technician assigned to these shops shall be thoroughly familiar with this equipment. Proper stowage and accountability is important to ensure that this equipment is always ready to use.

Required Safety Equipment

The following is a list of the required equipment:

- Shorting Probe
- Floor Matting
- Rubber Gloves/w Glove Shells
- Safety Goggles

Shorting Probe

An approved electrical shorting probe shall be located conspicuously and conveniently in all spaces where electrical or electronic equipment is installed.

See the illustration on page 18 for an example of an approved shorting probe.

Floor Matting

Approved rubber floor matting shall be installed in open spaces around electrical or electronic equipment and work benches.

See the Electronics Manual, COMDTINST M10550.25 for a list of approved floor matting.

Safety Goggles

The enclosed type, all plastic goggles shall be provided for use as required, for example:

- cleaning equipment
- using solvents
- soldering, etc.

5.D.01c Required AVT Shop Safety Equipment (Continued)

Glove Shells

Leather glove shells shall be worn over the rubber gloves as protection against abrasive wear, tears and punctures.

NOTE

The leather glove shells alone do NOT ensure protection against electrical shock.

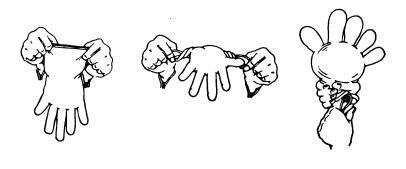
Rubber Gloves Requirements

Listed below are general requirements for the rubber gloves:

- Electrical grade rubber gloves with a minimum protection rating of 5,000 Vac and a gauntlet cuff four inches long shall be available for use as required
- Gloves should be frequently inspected, checked and replaced if the inspection reveals any damage such as cracks, cuts, pinholes, etc.
- Gloves should be stowed in a canvas glove bag along with the leather protective shells away from direct sunlight, and other heat sources. They should also be stored away from all ozone producing sources, such as large electric motors

Checking Rubber Gloves Procedure

Use the following procedures when checking rubber gloves:



STEP 1	STEP 2	STEP 3

Step	Action
1.	Hold glove at each corner of the gauntlet.
2.	Revolve it about the axis of the gauntlet corners.
3.	Hold the rolled up gauntlet tightly in one hand preventing the air from escaping.
4.	Gently squeeze the palm of the glove with the other hand.
5.	Check for air escaping through holes or cracks in the hand and finger areas.
6.	If air is found to be leaking do not wear the gloves.

There are certain tasks or jobs that REQUIRE the use of a respirator. The Commandant has implemented a unit Respiratory Protection Program, and each unit has an appointed Respirator Program Coordinator (RPC) that administers the program.

Responsibilities

It is the responsibility of the individual and the individual's supervisor to ensure that the guidelines of the program are being followed, and both are held accountable.

Training

Each unit shall provide training supporting the program as listed in the Practices for Respiratory Protection, COMDTINST M6260.2.

Respirators

Technicians may be issued respirators depending on their actual job requirements. There are many different types and styles of respirators. However, they must ALL meet NIOSH or MSHA standards if they are used by Coast Guard personnel.

Issue of Respirators

Respirators should be issued by the unit's Respirator Program Coordinator. This is a procedure in which the respirator is fitted to each individuals face by performing a series of tests including:

- Smell Tests
- Positive Pressure Tests
- Negative Pressure tests

Respirator Care

The individual is responsible for the following care pertaining to respirators:

- Cleaning
- Storage
- Use
- General care

This care should be carried out IAW the manufacture(s) instructions. However, maintenance and repair of respirators should be performed by trained personnel only.

Conserving your hearing requires a conscious effort through the wearing of hearing protection under high noise level conditions. Hearing conservation is very important due to the fact that once you have suffered hearing loss, it is irreversible.

Facts About Hearing Loss

The loss of hearing is generally painless, permanent and may not be noticed by the individual for some time. The Coast Guard has implemented a Hearing Conservation Program (HCP) which provides for early detection and protection of further hearing loss.

Hearing loss which exceeds the parameters listed in chapter 12 of the Medical Manual (COMDTINST M6000.1) may result in the person being grounded and removed from flight orders.

Effects of High Noise Levels

High noise levels can produce symptoms that may lead to a hazardous condition with the potential for a mishap. Listed below are some of the more common effects on the body resulting from high noise levels:

- Dilation of blood vessels
- Dizziness
- Emotional irritability
- Lack of concentration
- Nausea
- Rise in blood cholesterol level
- Rise in blood pressure
- Vomiting
- Weakness of the knees

Hearing Protection

There are many different types and styles of hearing protection available, with different levels of noise reduction effectiveness. They all serve the same purpose, protecting your hearing.

Examples of Hearing Protection

Listed below are examples of some different types of hearing protection:

- Insert type (foam, rubber, silicone, etc.)
- Over the ear type (helmet, cranial, muffs, etc.)

Required Hearing Protection

Hearing protection is REQUIRED when working with equipment or in areas capable of producing noise levels above 84 dB. Double hearing protection (insert <u>and</u> over the ear type) shall be worn if the noise level is more than 104 dB. There should be signs posted on the equipment or in the areas of high noise levels warning personnel of this hazard.

No matter which type of hearing protection you use, think "SAFETY" and keep your hearing protection with you at all times when working with equipment or in areas with the potential to produce high noise levels.

Electrical Fires 5.D.01c

Introduction

A general description of fire prevention, the nature of fire, the classes of fires, and fire fighting systems and equipment is found in the Basic Military Requirements. Therefore, only electrical fires will be covered in this section.

Electrical Fire Classification

An electrical fire (Class C) is classified as electrical equipment fires. Technically, an electrical fire is nothing more than a Class A or Class B fire. Meaning, some sort of ash producing material (Class A) or flammable liquid (Class B) such as the oil in some transformers, is burning.

Class C Fire Extinguishing Agents

Carbon Dioxide (CO₂) and Dry Chemical (Purple Potassium Powder) or (PKP) are the most common agents used to extinguish electrical equipment fires.

Carbon Dioxide Fire Extinguisher

The Carbon Dioxide (CO_2) type fire extinguisher is the preferred agent used to extinguish electrical equipment fires. The reason being, CO_2 does not conduct electricity and does not damage electrical equipment. CO_2 acts against the fire in two ways; first, it has a cooling effect and second, by decreasing the amount of oxygen present at the fire.

Carbon Dioxide Fire Extinguisher Use Guidelines

Follow the guidelines listed below when using CO₂ fire extinguishers on electrical equipment fires:

WARNING

Discharge of a CO₂ type fire extinguisher in a small space may decrease the oxygen content to a level which may overcome the occupants.

- Do not touch energized circuits with the fire extinguisher discharge horn
- Leave the fire extinguisher in contact with the deck whenever possible
- Direct the agent at the base of the flames
- Use short intermittent bursts of the agent

Dry Chemical Fire Extinguisher

If CO₂ fire extinguishers are not available, use a dry chemical agent as the next means of extinguishing electrical equipment fires.

Dry chemical fire extinguishers do however, create an intense cloud of dust and extensive clean-up is required.

Dry Chemical Fire Extinguisher Use Guidelines

The use of dry chemical fire extinguishers is essentially the same as for CO₂ extinguishers. The one difference is you should use a side-to-side sweeping motion with the agent at the base of the flames instead of the short intermittent bursts.

Water Fire Extinguisher

Due to the electrical conductivity of water, the following caution shall be observed:

CAUTION

To avoid the risk of electrocution, do NOT use water-type fire extinguishers on electrical equipment fires.

Extinguishing Electrical Equipment Fires Guidelines

Use the following guidelines when extinguishing electrical equipment fires:

- Sound the alarm
- Secure electrical power
- Try to extinguish or control the fire using the appropriate fire extinguisher and fire fighting procedures

NOTE

Do not endanger your life or the life of others attempting to extinguish a fire that is beyond your capability.

Electrical and electronic equipment may need to be cleaned from time to time or when maintenance requirements dictate. There are specific procedures listed in the applicable maintenance publications.

Using Aerosol Cleaners Guidelines

Aerosol cleaners are a very convenient means of cleaning electrical and electronic equipment. However, when using aerosol cleaners follow these general guidelines:

- Carefully read and follow the instructions listed on the container
- Ensure there is adequate ventilation available by opening doors and windows, or take the equipment outdoors, or use an appropriate respirator to prevent inhalation of the vapors
- Do not spray protective coatings on warm or energized equipment
- Keep aerosols away from sources of heat
- Follow the MSDS for procedures on disposal and first aid

Cleaning Electrical Contacts and Parts Guidelines

From time to time you may be called upon to clean electrical contacts or a piece of electrical or electronic equipment. Use the prescribed information listed in the applicable maintenance publication and follow the general guidelines listed below:

- De-energize and tag out the equipment
- Do not use steel wool on electrical or electronic equipment (residual particles of steel may cause short circuits)
- Do not use emery cloth; sandpaper is acceptable (again, residual particles from the emery cloth may cause short circuits)
- Do not repaint equipment in lieu of cleaning
- Use only moisture-free air at no more than 30 psi for blowing out equipment
- Use only vacuum cleaners that have a non-metallic hose and attachments

5.D.01c Lighting

Introduction

Adequate and appropriate lighting is essential in supporting ideal working conditions in any shop. Lighting can work for or against you depending on its application. One of the ways that lighting can work against you is called glare.

Glare Definition

Glare is defined as a harsh, uncomfortably bright light.

Effects of Glare

The effects of glare in a electrical or electronic shop are negative and counter productive. Listed below are some of the most common effects that glare can cause:

- Eye fatigue/strain
- Irritability
- Headache
- Stress

Guidelines for Eliminating Glare

Glare is often a side effect of an improperly installed or adjusted light source. The best protection against the harmful effects of glare is to eliminate it by any or all of the following guidelines:

- Avoid extreme brightness contrasts between the work area and background
- Turn on lighting fixtures that are installed beyond the work area
- Replace any burned out lamps
- Use only shielded lighting fixtures
- Wear a visor

Questions

Aı	nswer the following questions on general AVT shop safety.
1.	A mishap is defined as an
2.	A near mishap is significant because
3.	is responsible
	for mishap prevention.
4.	Safety is defined as
5.	The two conditions that must be present to result in an electrical shock is:
6.	The current flow that is usually considered to be fatal is
7.	In reference to an electrical shock, secondary injuries are sustained
	Continued next page

Questions (Continued)

8. The five steps for treating a victim of electrical shock are:

Step	Action
1	
2	
3	
4	
5	

9.	The two types of electrical warning signs found in electrical and electronic shops are and
10.	Electrical warning tags are used by
11.	Who should remove electrical warning tags?
12.	What type of bodily injury will biological RF hazard produce?
13.	The two body organs most sensitive to RF radiation are and
14.	What manual lists the permissible RF exposure limits?
15.	What hazard should be considered before performing maintenance on a seemingly dead piece of electrical or electronic equipment?
	-·

Questions (Continued)

16.		increased danger wh lue to	nen working with potentials over
17.			personnel shall be or electronic equipment.
18.	electronic e equipment	-	work on energized electrical or ntials over 30 volts, what safety
19.		fety equipment that is and electronic shop	s required to be readily available as.
20.	The require	ed voltage rating for volts.	
21.		g the guidelines are b	are responsible peing followed regarding the unit
22.	Thepersonal re	is responsi	ible for the cleaning and storage of
23.	Hearing co	nservation is very in	nportant due to the fact that
24.	The purpos	se of the Hearing Cor	nservation Program is

Questions (Continued)

25.	List below any five possible effects that high noise levels have on the body:
	1
	2
	3
	4
	5
26.	Hearing protection is REQUIRED when
27.	Carbon dioxide is the preferred fire extinguishing agent for electrical equipment fires because
28.	Complete the warning associated with using a CO ₂ fire extinguisher below: "Discharge of a CO ₂ fire extinguisher in a small space
	·
29.	type fire extinguishers should NOT be used on electrical equipment fires.
30.	The effects of glare are:
	

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Feedback

Compare your answers to the feedback provided below. If you had trouble with this self-quiz, please review the appropriate section of this assignment.

Question	Answer	Reference
1.	unplanned event that results in injuries to personnel, loss of life and or damage to equipment	5
2.	it serves as a warning	5
3.	The entire chain of command	5
4.	the condition of being safe from undergoing or causing damage, injury or loss	7
5.	some part of the body must form a part of a closed circuit there must be a difference in potential to cause current to flow through the circuit	9
6.	140 milliamperes	9
7.	as a result of surprise and are sometimes in themselves fatal	10
8.	 Ensure the source of electrical power has been secured or removed Provide airway care Provide CPR as required Treat burns and secondary injuries Seek medical attention 	11
9.	"High Voltage", "RF Radiation Hazard"	12

Feedback (Continued)

The following is a continuation of the General AVT Shop Safety Feedback.

Question	Answer	Reference
10.	by technicians to identify a circuit or component that has been intentionally secured	13
11.	The technician who's name appears on the tag.	13
12.	Damage to tissue and internal organs	14
13.	Eyes, Testicles	14
14.	COMDTINST M10550.25	15
15.	the electrical charge retained by some electrical and electronic equipment is sufficient to cause a lethal shock	17
16.	high voltage arc-over	20
17.	trained, competent	21
18.	Rubber gloves	21
19.	Shorting Probe Floor Matting Rubber Gloves/w Glove Shells Safety Goggles	23
20.	5,000	25
21.	individual, supervisor	26
22.	individual	26
23.	once you have suffered hearing loss it is irreversible	27

5.D.01c General AVT Shop Safety Self-Quiz Feedback (Continued)

Feedback (Continued)

The following is a continuation of the General AVT Shop Safety Feedback.

24.	to mayide contribution and masterial	27
<i>∠</i> 4.	to provide early detection and protection of further hearing loss	
25.	Any 5 of the following are acceptable:	27
	Dilation of blood vessels	
	• Dizziness	
	Emotional irritability	
	Lack of concentration	
	Nausea	
	Rise in blood cholesterol level	
	Rise in blood pressure	
	Vomiting	
	Weakness of the knees	
26.	when working with equipment or in areas capable of producing noise levels above 84 dB	28
27.	CO ₂ does not conduct electricity and does not damage electrical equipment	29
28.	may decrease the oxygen to a level which may overcome the occupants	29
29.	Water	30
30.	Eye fatigue/strain	32
	Irritability	
	Headache	
	Stress	
	l .	

Performance

INSTRUCT personnel in AVT shop safety procedures.

Given the necessary information, PREPARE a training session on AVT shop safety IAW:

General AVT Shop Safety, 5.D.01c

Electronics Manual, COMDTINST M10550.25

Performance Objective 2

Given the applicable information, **PRESENT** a training session on AVT shop safety IAW the Military Requirements for E-5/E-6

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Syllabus 5.D.01

Introduction

There are 13 separate performance objectives for this performance qualification and they must ALL be demonstrated to satisfy the sign-off requirements.

At commands where facilities or equipment are not available, your supervisor should refer to the "Administration" section of the Enlisted Qualifications Manual, COMDTINST M1414.8 for guidance.

Performance

COMPLETE minimum performance checks on the following avionics systems/components.

Performance Objective 1

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a VOR/ILS receiver IAW the publications listed in the AVILSP.

Performance
Objective 2

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a TACAN receiver/transmitter IAW the publications listed in the AVILSP.

Performance
Objective 3

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a Radar system IAW the publications listed in the AVILSP.

Performance Objective 4

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a RADALT system IAW the publications listed in the AVILSP.

Performance Objective 5

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on an IFF transponder IAW the publications listed in the AVILSP.

Performance Objective 6

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a DF unit IAW the publications listed in the AVILSP.

		A

Performance Objective 7

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on an ADF receiver IAW the publications listed in the AVILSP.

		_B

Performance Objective 8

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a GPS receiver IAW the publications listed in the AVILSP.

		B

Performance Objective 9

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a VHF AM transceiver IAW the publications listed in the AVILSP.

Performance Objective 10

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a VHF FM transceiver IAW the publications listed in the AVILSP.

	Á

Performance Objective 11

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on a UHF transceiver IAW the publications listed in the AVILSP.

Performance Objective 12

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on an HF transceiver IAW the publications listed in the AVILSP.

		4
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Performance Objective 13

Given an Avionics Integrated Logistic Support Plan (AVILSP) and the necessary equipment, **COMPLETE** a minimum performance check on an ICS system IAW the publications listed in the AVILSP.



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APPENDIX A, PAMPHLET REVIEW QUIZ

 The technical librarian should issue an audit report to each shop every months. A. two B. three C. four D. six 	 5. Which of the following inspections is categorized as a routine inspection? A. Hourly/Weekly B. TCTO C. Bird Strike D. Hard Landing
 2. The shop technical publications audit should be completed within working days. A. 5 B. 10 C. 15 D. 20 	 6. Special inspections are maintenance checks that A. are accomplished on a regular or scheduled basis B. are conditional upon operational environment, specific incidents, or other circumstances requiring inspections C. provide servicing and verification of satisfactory functioning of
 3. Which form should be used to request a correction to the CGTO 1H-65A-1, Flight Manual? A. AFTO Form 103 B. CG-22 C. CG-4377 D. AF Form 847 	critical systems at frequent intervals D. determine if maintenance was performed properly
4. Specific inspection requirements for each aircraft type can be found in which of the following Commandant Instructions?	

A. M3710.1 (series)B. M3710.2 (series)C. M13020.1 (series)D. M130550.1 (series)

- 7. If a maintenance procedure requires a follow-up special inspection, it is scheduled on which form?
 - A. CG-4377, Part II
 - B. CG-4377B
 - C. CG-4377A
 - D. CG-5181
- 8. Applicability of a TCTO is determined by _____.
 - A. Commandant (G-SEA)
 - B. Engineering officer at each unit
 - C. Aircraft type Prime Unit
 - D. Aircraft Standardization Team
- 9. To track compliance of a TCTO, it will appear on which ACMS report?
 - A. How Gozit Report
 - B. Maintenance Due List (MDL)
 - C. Configuration Report
 - D. Maintenance Requirements List (MRL)
- 10. Which feature of an Air Force Interim TCTO serves as direction for compliance?
 - A. Solid black border
 - B. Black and white diagonal border
 - C. Double heading
 - D. Heading in red ink

- 11. Select from the groups below, the group with the correct sequence of general troubleshooting steps.
 - A. 1. Perform an operational check
 - 2. Isolate and Locate the malfunction
 - 3. Conduct a visual inspection
 - 4. Correct the malfunction
 - 5. Conduct a final operational check
 - B. 1. Conduct a visual inspection
 - 2. Isolate and Locate the malfunction
 - 3. Correct the malfunction
 - 4. Perform an operational check
 - 5. Conduct a final operational check
 - C. 1. Conduct a visual inspection
 - 2. Perform an operational check
 - 3. Isolate and Locate the malfunction
 - 4. Correct the malfunction
 - 5. Conduct a final operational check
 - D. 1. Isolate and Locate the malfunction
 - 2. Conduct a visual inspection
 - 3. Perform an operational check
 - 4. Correct the malfunction
 - 5. Conduct a final operational check

12. Using the troubleshooting scenario below, select from the list of general troubleshooting steps the next step that should be performed.

You are the technician working on a hydraulic pressure fluctuation discrepancy; you notice that the fluid in the hydraulic reservoir is below the "minimum" level. You service the hydraulic reservoir to the correct level. There are no apparent leaks in the system and there are no other visible conditions that could affect the system.

In reference to the general troubleshooting guidelines, what should be your next step?

- A. Perform an operational check
- B. Isolate and locate the malfunction
- C. Correct the malfunction
- D. Conduct a visual inspection
- 13. Select the general troubleshooting step that involves this general troubleshooting guideline characteristic: "verifying the suspect component".
 - A. Isolate and locate the malfunction
 - B. Correct the malfunction
 - C. Perform an operational check
 - D. Conduct a visual inspection

14. Using the scenario below answer the question that follows it.

A technician is replacing numerous LRU's that were removed for testing in the shop while engaged in a conversation with another technician. After removal of one of the same LRU's for troubleshooting it was noted that several of the contact pins were bent. Which mishap attribute most likely contributed to the scenario?

- A. Deviating from prescribed procedures
- B. Inattention to the job
- C. Inexperience
- D. Not allowing enough time
- 15. Using the scenario below answer the question that follows it.

While working in the shop you notice that another technician is engaged in soldering without wearing safety goggles. What mishap prevention guideline should you follow?

- A. Wear or use the required, approved protective clothing or equipment.
- B. Warn personnel of known hazards.
- C. Point out the lack of required safety equipment or take the initiative provide them with the required equipment.
- D. Report any condition, equipment, or procedure that is considered to be unsafe.

- 16. The current value that is usually fatal as a result of an electrical shock is _____ milliamperes.
 - A. 1
 - B. 4
 - C. 14
 - D. 140
- 17. From the list below, identify the incorrect sign or symptom of a serious electrical shock.
 - A. Breathing difficulty
 - B. Visual difficulties
 - C. Fever
 - D. Irregular heartbeat or cardiac arrest

- 18. Select the group of electrical shock first aid steps that are listed in the correct order.
 - A. 1. Provide airway care
 - 2. Ensure the source of electrical power has been removed or secured
 - 3. Provide CPR as required
 - 4. Treat burns and secondary injuries
 - B. 1. Ensure the source of electrical power has been removed or secured
 - 2. Provide airway care
 - 3. Provide CPR as required
 - 4. Treat burns and secondary injuries
 - C. 1. Provide airway care
 - 2. Ensure the source of electrical power has been removed or secured
 - 3. Provide CPR as required
 - 4. Treat burns and secondary injuries
 - D. 1. Provide airway care
 - 2. Treat burns and secondary injuries
 - 3. Ensure the source of electrical power has been removed or secured
 - 4. Provide CPR as required
- 19. What two body organs are most sensitive to RF radiation?
 - A. Brain and Heart
 - B. Heart and Lungs
 - C. Eyes and Liver
 - D. Eyes and Testicles

- 20. What is the danger associated with checking voltages over 300 volts?
 - A. The meter probe may melt
 - B. Shop meters are not rated for high voltages
 - C. Possibility of high voltage arc-over
 - D. There is none
- 21. Select the group listing the required AVT shop safety equipment:
 - A. Safety pliers
 Shorting probe
 Rubber gloves/w glove shells
 Safety goggles
 - B. Floor matting
 Rubber gloves/w glove shells
 Grounding wire
 Respirator
 - C. Shorting probeFloor mattingRubber gloves/w glove shellsSafety goggles
 - D. RespiratorSafety gogglesRubber gloves/w glove shellsShorting probe

- 22. Who is responsible for ensuring the guidelines of the Respiratory Protection Program are being followed?
 - A. The individual and the individual's supervisor
 - B. Safety officer
 - C. Hazmat officer
 - D. Quality assurance
- 23. Who is responsible for issuing respirators?
 - A. Respirator Program Coordinator
 - B. Medical Department
 - C. Life Support Division
 - D. Quality Assurance
- 24. Select the group of tests used to fit respirators to an individual's face.
 - A. Submergence Wind blast Head shake
 - B. Smell
 Positive pressure
 Negative pressure
 - C. Particle Vapor Mist
 - D. Permeation Osmosis Absorption

- 25. What respirator care description is the individual **NOT** responsible for?
 - A. Storage
 - B. Maintenance
 - C. Cleaning
 - D. All of the above
- 26. Which effect on the body does **NOT** pertain to the effects of high noise levels?
 - A. Lack of concentration
 - B. Shortness of breath
 - C. Nausea
 - D. Raise in blood cholesterol level
- 27. What is the decibel level at which double hearing protection is required?
 - A. 60
 - B. 64
 - C. 84
 - D. 104
- 28. What is the preferred fire extinguishing agent used to extinguish electrical equipment fires?
 - A. Water
 - B. Fog
 - C. Carbon Dioxide
 - D. Purple Potassium Powder

- 29. Select the group of fire extinguishing guidelines that pertain to electrical equipment fires.
 - A. Open all doors and windows to prevent smoke build-up Secure electrical power Extinguish the fire
 - B. Secure the power Sound the alarm Extinguish the fire
 - C. Sound the alarm Secure the power Extinguish the fire
 - D. Sound the alarm
 Open all doors and windows to
 prevent smoke build-up
 Extinguish the fire
- 30. Select the effect that does **NOT** pertain to the effects of glare.
 - A. Irritability
 - B. Headache
 - C. Fever
 - D. Eye fatigue/strain

APPENDIX C, REFERENCES

Publication Number	<u>Publication Name</u>
ACMS	Aircraft Computerized Maintenance System
1C-130H-2-13	Airplane Wiring Diagram
1C-130H-2-22FI	Autoflight (Fault Isolation)
1C-130H-2-22GS	Autoflight (General Systems)
1C-130H-2-22JG	Autoflight (Job Guide)
1C-130H-2-23FI	Communications (Fault Isolation)
1C-130H-2-23GS	Communications (General Systems)
1C-130H-2-23JG	Communications (Job Guide)
1C-130H-2-24FI	Electrical Power (Fault Isolation)
1C-130H-2-24GS	Electrical Power (General Systems)
1C-130H-2-24JG	Electrical Power (Job Guide)
1C-130H-2-33FI	Lighting (Fault Isolation)
1C-130H-2-33GS	Lighting (General Systems)
1C-130H-2-33JG	Lighting (Job Guide)
1C-130H-2-34FI	Navigation (Fault Isolation)
1C-130H-2-34GS	Navigation (General Systems)
1C-130H-2-34JG	Navigation (Job Guide)
1C-130H-2-7	Electrical Systems
1C-130H-2-8	Radio/Communications and Navigation
	Systems
1C-130H-4	Illustrated Parts Breakdown
1H-65A-2-1	Maintenance Manual
1H-65A-2-2	Wiring Diagram Manual
1H-65A-2-3	Avionics System Maintenance Manual
1H-65A-4	Illustrated Parts Catalog

APPENDIX C, REFERENCES

Publication Number	Publication Name
1U-25A-2	Maintenance Manual
1U-25A-2-9	Wiring Manual
1U-25A-4	Illustrated Parts Catalog
A1-H60CA-WCR-00	Wiring Systems Repair Organ. Maint.
A1-H60JA-WCR-000	Wiring Systems Repair
A1-H60JA-WDM-000	Wiring Data Manual Organ. Maint.
AFTO 1-1A-14 (NAVAIR 01-1A-505)	Installation Practices for Aircraft Electric
	and Electronic Wiring
COMDTINST M10550.25 (series)	Electronics Manual
COMDTINST M13020.1 (series)	Aeronautical Engineering Maintenance
	Management Manual
COMDTINST M1414.8 (series)	Enlisted Qualifications Manual
COMDTINST M6000.1	Medical Manual
COMDTINST M6000.3 (series)	First Aid and Health Lesson Plans
COMDTINST M6260.2 (series)	Technical Guide: Practices For Respiratory
	Protection
CGTO: 1C-130H AVILSP	Avionics Integrated Logistics Support Plan
CGTO: 1U-25A AVILSP (series)	Avionics Integrated Logistics Support Plan
CGTO: 1H-60J AVILSP	Avionics Integrated Logistics Support Plan
CGTO: 1H-65A AVILSP	Avionics Integrated Logistics Support Plan

APPENDIX D, STUDENT FEEDBACK FORM

Please use this form for any feedback you may have concerning this course. Submit your recommendations IAW instructions on

	page D-2. I needed.	Note: Use the reverse side of this page if more space is
How?	Note your s	uggestions, corrections, and comments below:
Page	Location on Page	Recommendations
Your Co	make? Wha	writing this pamphlet, what improvements would you at was good about it? What didn't you understand? becific in your comments/suggestions.

Name	Unit	Phone
		()

you if needed.

Please provide the following information so that we can contact

To Contact You

Instructions

APPENDIX D, STUDENT FEEDBACK FORM

Submit Suggestions After completing this form please mail, FAX, or phone your

information to:

Commanding Officer PHONE: (252) 335-6856 U.S. Coast Guard Aviation FAX: (252) 335-6103

Technical Training Center

Attn: AVT Subject Matter Specialist (NRT)

Elizabeth City, NC 27909-5003

RECORD OF PERFORMANCE QUALIFICATIONS

DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD

AVT

INSTRUCTIONS

Regular enlisted reserve enlisted members of the Coast Guard shall complete the Record of Performance Qualifications as outlined in the Enlisted Qualifications Manual COMDTINST M1414.8 (series). The member's supervisor certifies performance qualification completion by dating and initialing in the appropriate column. Previous qualification certifications need not be duplicated. However, members must demonstrate proficiency in all new qualification assignments.

Not all qualifications can be completed during drill periods by reserves. Reserve Units shall indicate, by circling in red, those qualifications a member should complete on ADT.

Rating		Abbreviation
AVIONICS TECHNICIAN		AVT
Date completed all performance qualifications for	or Rate Level.	
E-4 E-5	E-6	i
E-7 E-8	E-9	
NAME (Last, First, Middle Initial)	Social Security Number	

PREVIOUS EDITION IS OBSOLETE

LOCAL REPRO AUTH

SIGNATURE OF SUPERVISOR

DATE	NAME and SIGNATURE	INITIAL S	RATE	UNIT
REMARKS				

PERFORMANCE QUALIFICATION FOR ADVANCEMENT Major Duty: A. Administrative Duty Task: 4.A.01c COMPLETE the Coast Guard Aviation Airman Syllabus. 5.A.01c COMPLETE assigned aircraft Basic Aircrewman Syllabus. 5.A.02c ORDER aircraft parts IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and local station instructions. 5.A.03c AUDIT technical publications and directives IAW the Technical Information, Management and Ordering System (TIMOS) User Process Guide, CGTO PG-85-00-50. 5.A.04c SUBMIT aircraft publication change requests IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and local station instructions. 6.A.01c REVIEW discrepancy information from aircraft records and DETERMINE appropriate action IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and local station instructions. 6.A.02c PROCURE parts, tools, and other materials IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and the Small Purchase Handbook, COMDTINST M4200.13 (series). 6.A.03c PREPARE shop and aircrew training schedules IAW the Air Operations Manual, COMDTINST M3710.1 (series) and the Training and Education Manual COMDTINST M1500.10 (series).	D. A TIPLY CO.			
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Operations Manual, COMDTINST M3710.1 (series) and the Training and Education Manual COMDTINST M1500.10	6.A.02c	Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and the Small Purchase		
	6.A.03c	Operations Manual, COMDTINST M3710.1 (series) and the Training and Education Manual COMDTINST M1500.10		

NAME (Last, First, Middle Initial)	SN
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RATING: A	VIONICS TECHNICIAN (AVT)	Date
6.A.04c	DIRECT personnel in the safe handling and disposal of hazardous material IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); the Safety and Environmental Health Manual, COMDINST M5100.47 (series); applicable Material Safety Data Sheets (MSDS); and state and local regulations.	
6.A.05c	ANALYZE Aviation Computerized Maintenance System (ACMS) component history data to identify trends and problem areas IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).	
6.A.06c	ORDER technical publications, directives, and manuals applicable to rating IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); the Directives, Publications, and Reports Index, COMDTNOTE 5600; and the Technical Information, Management and Ordering System (TIMOS) User Process Guide, CGTO PG-85-00-50.	
6A.01	MAINTAIN shop Electronic Inventory Records (EIR) IAW the Unit Accountable Item Management (AIM) User Manual.	
7.A.01c	ESTABLISH local safety procedures and standards for unit Aviation Engineering Department IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).	
7.A.02c	MANAGE rate-related Aviation Computerized Maintenance IAW the ACMS User's Guide, CGTO PG 85-00-10 and the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).	
7.A.03c	PREPARE aircraft reports IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).	
7.A.04c	REVIEW completed maintenance forms for compliance with the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).	

NAME (Last, First, Middle Initial)	SSN	
TVAIVLE (Last, 1 list, whole initial)	3314	

RATING: AV	Date	
7.A.05c	PREPARE the Unit Training Plan IAW the Training and Educational Manual, COMDTINST M1500.10 (series) and the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).	
7.A.06c	MANAGE shop inventory processes IAW applicable publications.	
7.A.01	PROCESS aircraft for receipt and transfer IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and the Air Operations Manual, COMDTINST M3710.1 (series).	
7.A.02	MANAGE the unit's Avionics Tracking System (ATS) IAW the ATS Operators Manual and ACMS Users Guide CGTO PG 85-00-10.	
8.A.01c	REVIEW applicable rating qualification codes and SUBMIT written recommendations to the Program Managers (G-SEA) IAW the Coast Guard Qualification Codes Manual, COMDTINST M1414.9 (series).	
8.A.02c	REVIEW unit aircrew flight requirements IAW the Air Operations Manual, COMDTINST M3710.1 (series) and the Coast Guard Pay Manual, COMDTINST M7220.29 (series).	
8.A.03c	REVIEW unit personnel qualification codes and UPDATE the Personnel Management Information System (PMIS) data base IAW the Qualifications Codes Manual COMDTINST M1414.9 (series).	
8.A.04c	MANAGE unit Aviation Engineering personnel duty assignments IAW station instructions and standing orders.	
8.A.05c	MANAGE unit Aviation Enlisted Assignment Process IAW the Personnel Manual, COMDTINST M1000.6 (series).	
8.A.06c	PREPARE budget requests IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1	

	(series) and the Manual of Budgetary Administration, COMDTINST M7100.3 (series).		
NAME (Last,	First, Middle Initial)	SSN	
RATING: AV	IONICS TECHNICIAN (AVT)	Date	Initials
8.A.07c	REVIEW unit Personnel Allowance List (PAL) to ensure it reflects unit staffing needs IAW the Enlisted Qualifications Code Manual, COMDTINST M1414.9 (series) and the Coast Guard Staffing Standards Manual, COMDTINST M5312.11 (series).		
9.A.01c	REVIEW rate-related performance qualifications and SUBMIT written recommendations to the Coast Guard Training Managers (G-WTT) and Program Managers (G-SEA) IAW the Enlisted Qualifications Manual, COMDTINST M1414.8 (series).		
Major Duty: B	. Aircraft Maintenance		
Task:			
4.B.01	REPAIR damaged and broken aircraft electrical cables, wires, and connectors IAW the Aircraft Wiring Manual, T.O. 1-1A-14 and Aircraft Electric and Electronic Wiring Manual, NAVAIR 01-1A-505 (series).		
4.B.02	ANALYZE AC power systems to the LRU/wire level IAW applicable publications.		
4.B.03	ANALYZE DC power systems to the LRU/wire level IAW applicable publications.		
4.B.04	ANALYZE aircraft lighting systems to the LRU/wire level IAW applicable publications.		
4.B.05	ANALYZE the following communication systems to the LRU/wire level IAW applicable publications:		
	 ICS VHF-AM VHF-FM UHF HF 		

NAME (Last, First, Middle Initial)	SSN	

RATING: AVIONICS TECHNICIAN (AVT)		Date	Initials
4.B.06	ANALYZE the following navigation systems to the LRU/wire level IAW applicable publications:		
	 VOR/ILS TACAN IFF DF ADF GPS Compass 		
4.B.07	ANALYZE Radar systems to the LRU/wire level IAW applicable publications.		
4.B.08	ANALYZE Radio/Radar Altimeter (RADALT) systems to the LRU/wire level IAW applicable publications.		
4.B.09	ANALYZE Air Data Systems (ADS) to the LRU/wire level IAW applicable publications.		
4.B.10	ANALYZE Automatic Flight Systems to the LRU/wire level IAW applicable publications.		
4.B.11	ANALYZE Flight Director Systems (FDS) to the LRU/wire level IAW applicable publications.		
4.B.12	UTILIZE test equipment to ISOLATE faults in basic aircraft electrical and electronic circuits IAW applicable publications.		
4.B.13	SAFETY WIRE and SHEARWIRE aircraft equipment IAW the Aircraft Electric and Electronic Wiring Manual, NAVAIR 01-1A-505 (series) and Aircraft and Missile Structural Hardware Manual, NAVAIR 01-1A-8.		
4.B.14	REMOVE corrosion from aircraft electrical and electronic equipment IAW the Avionics Cleaning and Corrosion Control Manual, NAVAIR 16-1-540 and applicable publications.		

5.B.01c	PERFORM special inspections of aircraft and aviation equipment IAW the Aviation Computerized Maintenance System (ACMS).		
NAME (Last,	First, Middle Initial)	SSN	l
RATING: AV	IONICS TECHNICIAN (AVT)	Date	Initials
5.B.02c	PERFORM authorized modifications of aircraft and aviation equipment IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and the Aviation Computerized Maintenance System (ACMS).		
5.B.01	TROUBLESHOOT AC distribution systems to the LRU/wire level IAW applicable publications.		
5.B.02	TROUBLESHOOT DC distribution systems to the LRU/wire level IAW applicable publications.		
5.B.03	TROUBLESHOOT aircraft lighting systems discrepancies to the LRU/wire level IAW applicable publications.		
5.B.04	TROUBLESHOOT the following communication systems to the LRU/wire level IAW applicable publications:		
	 ICS VHF-AM VHF-FM UHF HF 		
5.B.05	TROUBLESHOOT the Secure Communications Systems to the LRU/wire level IAW applicable publications.		
5.B.06	TROUBLESHOOT the following navigation systems to the LRU/wire level IAW applicable publications.		
	 VOR/ILS TACAN IFF DF ADF GPS Compass 		

5.B.07	TROUBLESHOOT the Radar system to the LRU/wire level IAW applicable publications.		
NAME (La	st, First, Middle Initial)	SSN	
RATING: A	AVIONICS TECHNICIAN (AVT)	Date	Initials
5.B.08	TROUBLESHOOT the Radio/Radar Altimeter (RADALT) system to the LRU/wire level IAW applicable publications.		
5.B.09	TROUBLESHOOT the Traffic Alert and Collision Avoidance System (TCAS) to the LRU/wire level IAW applicable publications.		
5.B.10	TROUBLESHOOT the Air Data System (ADS) to the LRU/wire level IAW applicable publications.		
5.B.11	TROUBLESHOOT the Automatic Flight System to the LRU/wire level IAW applicable publications.		
5.B.12	TROUBLESHOOT the Flight Director System (FDS) to the LRU/wire level IAW applicable publications.		
6.B.01c	DIRECT line crew operations IAW the Aviation Computerized Maintenance System (ACMS) and local station instructions.		
6.B.01	DIRECT the repair of aircraft systems IAW the Aviation Computerized Maintenance System (ACMS); Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); and applicable publications.		
6.B.02	SUPERVISE functional checks of aircraft systems IAW the Aviation Computerized Maintenance System (ACMS); Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); and applicable publications.		
6.B.03	SWING and ADJUST aircraft compass systems IAW the applicable Aviation Computerized Maintenance System (ACMS) Maintenance Procedure Card (MPC) and applicable publications.		

NAME (La	ast, First, Middle Initial)	SSN	
RATING: A	AVIONICS TECHNICIAN (AVT)	Date	Initials
Major Duty	r: C. General Aviation		
Task:			
7.C.01c	REVIEW the unit aircraft salvage plan IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series); applicable aircraft manuals; and local station instructions.		
7.C.02c	DIRECT Quality Assurance (QA) inspections IAW the Aviation Computerized Maintenance Systems (ACMS); the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.2 (series); and applicable publications.		
7.C.03c	PREPARE the following types of local maintenance instructions IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).		
	 Continuing Action Maintenance Instruction (CAMI) Single Action Maintenance Instruction (SAMI) Technical Information Maintenance Instruction (TIMI) 		
Major Duty	: D. Shop Maintenance		
Task:			
4.D.01	SERVICE aircraft batteries IAW the Nickel Cadmium Battery Storage Manual, T.O. 8D2-3-1 and applicable publications.		
5.D.01c	INSTRUCT personnel in shop safety procedures IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series); Safety and Environmental Health Manual, COMDINST M5100.47; and other		

	applicable publications.		
NAME (La	ast, First, Middle Initial)	SSN	
RATING: A	AVIONICS TECHNICIAN (AVT)	Date	Initials
5.D.01	COMPLETE minimum performance checks on the following systems/components IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series), and Component Maintenance Manuals (CMM'S): 1. VOR/ILS receiver 2. TACAN receiver/transmitter 3. Radar system 4. RADALT system 5. IFF transponder 6. DF unit 7. ADF receiver 8. GPS receiver 9. VHF AM transceiver 10. VHF FM transceiver 11. UHF transceiver 12. HF receiver/exciter 13. ICS system		
6.D.01c	DIRECT shop maintenance IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and applicable publications.		
6.D.02c	INSTRUCT personnel in the proper disposition of defective aircraft components IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series) and applicable publications.		
6.D.03c	INSPECT work areas, tools and aviation equipment for safety compliance IAW the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series), and the Safety and Environmental Health Manual, COMDTINST		

	M5100.47 (series).		
6.D.04c	COORDINATE calibration and repair of special tools and measuring equipment IAW the Aeronautical Engineering Management Manual, COMDTINST M13020.1 (series) and local station instructions.		
NAME (La	st, First, Middle Initial)	SSN	

TERMINOLOGY

ANALYZE: To separate into fundamental parts or basic principles so as to determine the nature of the whole.

APPLICABLE PUBLICATIONS: The appropriate aircraft system, component or general aviation instruction.

AUDIT: Official examination and verification of publications and directives.

LRU: Line Replaceable Unit: an item designed to be removed and replaced on the aircraft.

REVIEW: To examine for the purpose of correcting possible errors.

SAFETY WIRE: The process of applying lockwire to prevent accidental loosening.

SERVICE: To provide minor maintenance, i.e. supplying with water, fuel, oil, air.

SHEARWIRE: The process of applying shearwire to prevent accidental actuation.

TROUBLESHOOT: The process of diagnosing, locating and repairing faults in equipment by means of systematic checking or analysis.

NAME (Last, First, Middle Initial)

Social Security Number